

# AUSTRALIAN HYMENOPTERA CHALCIDOIDEA—XI.\*

The Family Eurytomidæ with Description of New Genera and Species.

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## FAMILY EURYTOMIDÆ.

THIS is doubtless the most difficult family of the whole complex and the genera need careful revision.

### EURYTOMINI.

GENUS EURYTOMA Illiger.†

Synonym: *Bephratella* Girault.

#### 1. EURYTOMA PIDYTES Walker. Male and female.

Walker, 1839, p. 2.

“Mas et Fem. *Atra*, antennæ nigrae, pedes nigri fulvo cincti, alae limpidae.

*Mas et Fem.*—*Atra*: oculi et ocelli rufi: antennæ nigrae: *mas* pedes fulvi; coxæ nigrae; tarsi apice fusci; meso- et metapedum femora nigra, tibiae piceo-cinctae: *fem.* pedes obscuriores; tibiae plerumque nigrae: alae limpidae; squamulae piceae; nervi picei, basi pallidiores. (Corp. long. lin.  $\frac{3}{4}$ — $\frac{1}{4}$ ; alar. lin.  $1\frac{1}{4}$ — $1\frac{3}{4}$ ).

Hobart Town, Van Dieman's Land; and in March at King George's Sound, Australia.

*Fem.*—Corpus convexum, longum, sublineare, fere cylindricum, obscurum, punctatum, parce hirtum: caput transversum, breve, thoracis latitudine: antennae clavatae, graciles, thorace paullo breviores; articulus 1us gracilis, sublinearis: petiolus brevis: abdomen longiovatum, subcompressum, nitens, laeve, fere glabrum, apice acuminatum, thorace vix brevius: segmenta subaequalia: alae medioeres.”

#### 2. EURYTOMA TELLIS Walker. Female.

Walker, 1839, p. 2.

“Fem. *Atra*, antennae nigrae basi fulvae aut piceae, pedes nigri fulvo-cincti, tarsi flavi, alae sublimpidae.

*Atra*, pilis albis vestita: oculi et ocelli rufi: antennae nigrae; articulus 1us fulvus, apice piceus; 2us apice fulvus: oviductus fulvus: pedes nigri; trochanters fulvi, tibiae piceae, basi et apice fulvae; tarsi flavi, apice fusci; protarsi fulvi: alae sublimpidae; squamulae piceae; nervi picei, basi pallidiores. (Corp. long. lin. 1; alar. lin.  $1\frac{3}{4}$ .)

*Var. β.*—Antennis articulus 1us piceus.

Sydney, New South Wales.

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† For additional descriptive details, see table of species.

*Fem.*—Corpus convexum, sublineare, punctatum, obscureum, parce hirtum: caput thorace vix latius: antennae clavatae, robustae, pilosae, thorace breviores; articulus 1us gracilis, sublinearis; 2us longicyathiformis; 3us et 4us brevissimi; 5us et sequentes breves, usque ad 9um latescentes; clava longiconica, articulo 9o latior et plus duplo longior: petiolus brevis: abdomen ovatum, subcompressum, nitens, laeve, fere glabrum, thorace non longius; segmentum 1um maximum, 2um et sequentia brevissima: alae medioeres."

### 3. EURYTOMA ARETHEAS Walker. Male and female.

Walker, 1839, p. 3.

"Mas et Fem. *Atra*, antennae nigrae, pedes nigri, tarsi fulvi, alae limpidae.

*Atra*: oculi et ocelli rufi: antennae nigrae: pedes nigri; trochanteres picei; genua fulva; tibiae apice fulvae; tarsi fulvi; propodeum tibiae fulvae, tarsi obscuriores: alae limpidae; squamulae piceae; nervi proalis picei, metalis fuscis. (Corp. long. lin.  $\frac{3}{4}$ —1; alar. lin.  $1\frac{1}{3}$ — $1\frac{1}{2}$ ).

March, King George's Sound, Australia.

*Mas.*—Corpus convexum, sublineare, punctatum, obscureum, parce hirtum: caput thorace vix latius: antennae graciles, noniliformes, verticillato-pilosae, thorace paullo longiores: petiolus sat longus: abdomen ovatum, compressum, nitens, laeve, fere glabrum, thorace brevius et angustius: alae latae."

### 4. EURYTOMA ELEUTHER Walker. Male.

Walker, 1839, pp. 3-4.

"Mas. *Atra*, antennae nigrae apice piceae, pedes fulvi piceo et fusco cincti, alae limpidae.

*Mas.*—*Atra*: oculi et ocelli rufi: antennae nigrae, apice piceae: pedes fulvi; coxae piceae; femora picea, apice fulva; meso- et metatibiae fusco cinctae; protarsi fuscis: alae limpidae; squamulae piceae; proalis nervi picei, metalis fuscis. (Corp. long. lin.  $\frac{4}{5}$ ; alar. lin.  $1\frac{1}{3}$ .)

Hobart Town, Van Dieman's Land; and in March at King George's Sound, Australia.

*Fem.*—Corpus longum, angustum, cylindricum, punctatum, parum nitens, parce hirtum: caput thorace paullo latius: antennae subclavatae, graciles, corpore breviores: petiolus brevis: abdomen fusiforme, nitens, laeve, fere glabrum, thorace vix brevius: alae angustae."

### 5. EURYTOMA AUSTRALIENSIS Ashmead. Female.

Length, 2.4 mm.

"Black and similar in structure to *E. studiosa* Say, clothed with a sparse white pubescence. Antennae wholly black; tegulae, tips of femora, tibiae, except a subfuscous median blotch outwardly and all tarsi honey-yellow. Pedicel small, obconic, very little longer than thick and smaller than the first joint of funicle; funicle 5-jointed, the joints nearly equal in size, submoniliform; club 3-jointed, as long as last three joints of funicle united. Wings hyaline, venation brown, the subcostal vein yellowish toward base. Hind coxae outwardly toward base shagreened. Abdomen conic-ovate, smooth and polished except the short petiole, which is rather coarsely shagreened; fifth dorsal segment longer than second and third united."

*Habitat*: Australia.

*Type*: No. 4883, United States National Museum, Washington, D.C., U.S.A.

### 6. EURYTOMA EUCALYPTI Ashmead. Male and female.

Length, 2.6 to 3 mm.

Black; anterior angles of pronotum, as seen from side, with a yellowish spot, seen from above, invisible; antennae, except apex of scape and base of pedicel which are black; mandibles, tegulae and legs, except hind coxae and middle of hind femora, ferrugineous or brownish yellow;

wings hyaline, costal vein yellow, marginal, stigmal and postmarginal veins brown-black, the latter subpetiolate, ending in a large rounded stigma with an uncus.

Vertex of head and thorax above clothed with a rufous pubescence, that on the face, sides of thorax and metapleura white or silvery white.

Funicle 5-jointed, the joints fluted and a little wider than long. Sides of thorax and parapsides *broadly* along sutures opaque and coriaceous. Marginal and postmarginal veins about of an equal length but the former stout, the latter acuminate; stigmal vein very short, ending in a large rounded stigma as in *Megastigmus*, with an uncus. Abdomen ovate and except segments 6 and 7, smooth, highly polished; the petiole which is hardly longer than thick and segments 6 and 7 finely rugulose or shagreened; fourth body segment very long, occupying fully half the whole surface of the abdomen.

The male measures from 2 to 2.4 mm. and agrees with the female except in its antennal and abdominal characters; joints of funicle excised and petiolate at apex, the basal portion of the joints with whorled hairs; basal part of first joint nearly twice as long as thick, basal part of the following being quadrate or nearly so; abdomen with petiole four times as long as thick, shagreened and with a grooved line down centre; body subglobose, segments subequal; hind coxæ opaque, coriaceous.

*Habitat*: Uralla, New South Wales. From galls on *Eucalyptus*.

*Type*: No. 4884, United States National Museum, Washington, D.C., U.S.A.

#### 7. EURYTOMA BINOTATA Ashmead. Female.

Length, 3.5 mm. to 5 mm.

Black, clothed with a whitish pubescence; pronotum with two oblong oval yellow spots, one on each anterior angle and both distinctly visible from above; scape of antennæ, pedicel at apex and legs except coxæ and a blotch on the middle of femora above, pale ferruginous; rest of antennæ and the coxæ black. Wings hyaline, venation brown, the marginal vein a little longer than the postmarginal; stigmal vein normal, very nearly as long as the postmarginal.

Head and thorax closely umbilicately punctate; funicle joints a little longer than thick; abdomen conic-ovate, subsessile, a little longer than head and thorax united, acutely pointed at apex, the sides of segments 4 to 7 ciliate with white hairs, the fourth segment and beyond very delicately shagreened at sides.

*Habitat*: Sydney, New South Wales. From galls on the turpentine tree.

*Type*: No. 4884, United States National Museum, Washington, D.C., U.S.A.

#### 8. EURYTOMA BRACHYSCOLIDIS Cameron. Male and female.

“Black, covered with whitish pubescence; trochanters, apex of femora, tibiæ and tarsi pale testaceous, oral region and almost the upper half of the propleuræ rufo-testaceous, under side of flagellum fuscous; the latter densely covered with a microscopic white pile; wings hyaline, nervures dark fuscous. The male has the face, clypeus, the lower orbits and the malar space testaceous. ♂, ♀, length, 1.5—2.5 mm.

Stowell, Victoria; bred from coccid (apiomorpha) galls on *Eucalyptus* sp. (C. Daly).

Antennæ in female short, thick, the second joint twice longer than wide, becoming gradually widened towards the apex; scape distinctly narrower than it, the other joints wider than it is long, the last conical, the narrowed parts of the joints in the male testaceous; the hairs are stiff and longer than the joints. Marginal nervure as long as the postmarginal and thicker than it; stigmal shorter than the latter, the lower thickened part semicircular, emitting a branch from the apical basal part. Parapsidal furrows shallow but distinct. Abdomen smooth and shining, the apical segments fringed with white hair.

This is probably a variable species. The face in the female may be broadly testaceous below. The fourth abdominal segment occupies the greater part of the abdomen. The testaceous mark on the pronotum varies in size; it is not visible from above. The tarsi may

be infuscated to a greater or less extent in the middle. There is no distinct club on the antennæ in the female, all the joints being of equal width to the base of the last. The abdomen is distinctly shorter than the thorax; it is almost sessile, the petiole being very short."

**9. EURYTOMA CLELANDI** Cameron. Female.

Length, 2 mm.

Black; oral region, underside of antennal scape, lower half of the upper inner orbits, the upper part gradually narrowed, malar space, mandibles, palpi and propleuræ entirely, rufo-testaceous; legs of a paler testaceous color, the four anterior femora slightly, posterior broadly, black above; wings hyaline, nervures black behind, testaceous in front; marginal vein distinctly longer and thicker than the postmarginal; the stigmal as long as the latter, its thickened apex obliquely narrowed from the base and apex to the centre, the two parts being of equal size; it has no projection.

The second joint of the antennæ is longer than wide and is distinctly narrower than the third, which is almost twice its length and distinctly wider than it; it is twice longer than wide; the other joints shorter, wider than long. The pubescence is white and dense; it is much longer on the metanotum. Head and thorax coriaceous, the pro- and mesonotum more or less transversely striated; the mesopleuræ finely, closely, obliquely striated; the metapleuræ much more closely striated. Parapsidal furrows straight, oblique, distinct. There is an aciculated line down the middle of the scutellum. The ventral surface of abdomen and the lower half of its side are testaceous.

*Habitat*: West Australia.

*Type*: Query.

This species belongs properly to *Xanthosoma*.

**10. EURYTOMA TASMANICA** Cameron. Male and female.

"Black; flagellum of antennæ, including the pedicel, testaceous; legs yellowish testaceous, paler than the antennæ; coxæ and hinder femora (more broadly in male than in female) black; wings hyaline, the nervures pale testaceous. Mandibles in both sexes rufo-testaceous, their teeth black; in the female there is a longish conical mark on either side of the clypeus; in the male this mark extends slightly obliquely up on either side of the centre of the face to near the antennæ, the clypeus being entirely rufo-testaceous. The antennæ in the male are black, except the pedicel and the narrowed parts of the flagellar joints are testaceous; the hairs are stiff, black and longer than the joints. Pubescence of head, thorax and legs white, moderately dense. Abdominal petiole in male as long as hind coxæ. Male and female, length, 2 mm.

Launceston, Tasmania (F. M. Littler).

Head above opaque, the face more shining. Thorax aciculated, pronotum sparsely, umbilicately punctate. Basal third of mesonotum finely, closely, transversely striated; the rest strongly aciculated, sparsely punctured, the scutellum finely, closely punctured and with some scattered punctures. Pro- and base of mesopleuræ opaque, alutaceous; the apex of the latter finely, closely reticulated. Metapleuræ finely rugose, opaque. Pedicel of antennæ in female twice longer than wide, the second joint roundly narrowed at base, as long as wide, the others to the club wider than long. Abdomen very smooth and polished, the petiole in female short; fifth segment much longer than the others, fully one-half the total length of the body. Stigmal branch with the knob longish, semicircular, projecting at the apex above."

**11. EURYTOMA XANTHERELLA** new species. Female.

Length, 2.20 mm.

Honey yellow, the wings hyaline, the venation nearly black; the abdominal petiole, base of abdomen rather broadly along the meson for some distance and tip of ovipositor (valves) fuscous, the flagellum dusky yellowish; scape and legs concolorous. Marginal vein nearly twice



the length of the stigmal. Propodeum with a median channel. Mandibles tridentate; two tibial spurs on hind legs. First funicle joint longer than wide, the remaining four subglobose but still a little longer than wide. First club joint subquadrate. Abdomen glabrous, the petiole over twice longer than wide.

*Habitat*: Gordonvale (Cairns), Queensland. Jungle, June 16, 1913 (A. P. Dodd).

*Type*: No. Hy 3220, Queensland Museum, Brisbane, the female on a tag, the head and hind legs on a slide with type *Atoposoma lancei*.

## 12. EURYTOMA NELSONIA new species. Female.

Length, 2.45 mm.

Opaque black, the abdomen except the blackish median line at proximal third or more and extreme tip, brown; legs honey yellow, the tarsi paler; antennæ dusky brown, the first three funicle joints cylindrical oval, subequal, the remaining two somewhat shorter; first club joint subquadrate, shorter than the second. Abdomen glabrous, the petiole long, the fifth segment longer than wide, from lateral aspect, the abdomen long ovate. Mandibles tridentate. The club is only 2-jointed. Scutum uniformly punctate, the punctures of thorax not deep.

*Habitat*: Gordonvale (Cairns), Queensland. Jungle, June 16, 1913 (A. P. Dodd).

*Type*: No. Hy 3221, Queensland Museum, Brisbane, the female on a tag, the head on a slide with slide type of *Elasmus pallidicornis*.

## 13. EURYTOMA FLAVITEGULA new species. Female.

Length, 2.30 mm.

Black and pubescent, the legs reddish brown including the coxæ, the tegulæ yellow, the fifth abdominal segment reddish, except at proximal third above (and also venter of 2-4); the tips of tibiæ and tarsi lemon yellow; wings hyaline, the venation pale yellow. Antennæ yellow-brown, the distal two funicle joints wider than long, the first funicle joint quadrate, longer than the pedicel. Disk of propodeum concave. Segments 4-6 of abdomen delicately scaly cephalad and nearly all of segment 6. Pro- and mesopleura punctate, the latter longitudinally striate caudad. Posterior margin of pronotum straight, the parapsidal furrows complete, the antennæ 10-jointed with one ring-joint, the funicle 5-jointed. Abdomen and venation as in *Eurytoma* except that the marginal vein is a little thickened and only slightly longer than the stigmal which is subequal to the postmarginal. Posterior tibia with two spurs. Pronotum nearly as long as the scutum. Umbilicately punctate uniformly, the punctures shallow.

*Habitat*: Capeville (Pentland), Queensland. Forest, December 27, 1912.

*Type*: No. Hy 3222, Queensland Museum, Brisbane, the female on a tag, the head and a hind leg on a slide.

## 14. EURYTOMA LINCOLNI Girault. Female.

Length, 2.50 mm.

Black, punctate, the abdomen reddish except at proximal third dorsad, the wings hyaline, the flagellum (including pedicel) black, the scape brownish at extreme base; legs except coxæ, red-brownish, paler at the tarsi; petiole of the abdomen black. Postmarginal vein slightly longer than the stigmal. Tegulæ brown. Funicle joints ovate, the first longest, much larger than the pedicel.

*Habitat*: Port Lincoln, South Australia.

*Type*: No. I. 1262, South Australian Museum. Tag and slide.

## 15. EURYTOMA MAZZINII Girault. Female.

Length, 1.80 mm.

Robust. Black, the head and thorax with short, greyish pubescence; abdomen ventro-meso-proximad brownish; coxæ and femora concolorous, tibiæ and tarsi reddish brown, also

the knees, most of the distal half of intermediate femora and all of the scape. Antennæ black, 11-jointed, the club 3-jointed, one ring-joint; joint 1 of funicle longest, ring-joint yellow. Wings hyaline, the postmarginal vein nearly as long as the marginal, slightly longer than the stigmal.

*Habitat*: Mount Tambourine, Queensland.

*Type*: No. I. 1350, South Australian Museum, Adelaide. Tag and slide.

#### 16. EURYTOMA CARLYLEI new species.

*Female*.—Length, 2.65 mm.

Black, the wings hyaline, the tegulæ, legs, segment 5 of abdomen (except along dorsum at meson), side of segment 6 and the scape, honey yellow. Abdominal petiole slender, distinctly much longer than wide. Marginal vein long for the genus, about one and three quarter times the length of the stigmal which is distinctly shorter than the postmarginal. Funicle 1 a little over half the length of the scape (excluding bulla). Propodeum with a median line of punctures which do not form a channel, the surface uniformly coarsely umbilicately punctate, or like the rest of the thorax and the head; abdomen polished, finely scaly near anterior margins dorsad of segment 5, segments 6 and 7 wholly scaly dorsad, the petiole densely shagreened. Scape black at tip above. Last funicle joint oval; club only 2-jointed, the antennæ 10-jointed, five funicle joints; joint 1 of club a little wider than long, a little over half the length of the second. Abdomen greatly convexed above, segment 5 the longest.

Described from one female captured by sweeping along edge of jungle, May 18, 1913 (A. P. Dodd). Dedicated to Thomas Carlyle.

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 3223, Queensland Museum, Brisbane, the above specimen on a tag, an antenna and a fore leg on a slide.

#### 17. EURYTOMA PICUS Girault. Female.

Length, 2.85 mm.

Robust. Black, the legs, tegulæ and scape rich reddish brown, the hind coxæ black, the wings hyaline; flagellum brownish yellow; knees and tips of tibiæ yellow. Propodeum with a rather broad median groove. Venation pale; postmarginal and stigmal veins subequal. Scape obelavate; pedicel a little shorter than funicle 1 which is longest of the funicle, much longer than wide, about twice the length of funicle 5 which is somewhat wider than long, funicle 4 a little longer than wide, funicle 2 subequal to the pedicel. Club with three distinct apparent joints, the antennæ 11-jointed. Mandibles tridentate. Hind tibiæ with two spurs. Pronotum with a more or less distinct, obtuse median carina. Punctuation not quite as dense as usual, the cephalic part of scutum densely transversely lineolated. Prothorax marked as in *acaciæ*. Segment 5 of abdomen plainly longest; tip of valves of ovipositor brown. Abdomen glabrous but distal segment dorsad plainly scaly. Type re-examined.

*Habitat*: Gordonvale (Cairns), Queensland. Reared from *Eucalyptus* twigs, October 16, 1913.

*Type*: No. Hy 3224, Queensland Museum, Brisbane. Tag and slide.

#### 18. EURYTOMA QUEENSLANDENSIS Girault. Female; male.

Length, 2.50 mm.

Black, the abdomen reddish except above at proximal third (segments 2 to 4); face, cheeks and mesal margin of eye on vertex lemon yellow (vertex and scrobes black) as is also the lateral aspect of the pronotum; tegulæ and legs fuscous, the tarsi paler. Wings hyaline, the venation blackish. Marginal vein distinctly longer than both the stigmal and postmarginal. Posterior coxæ black laterad and the abdominal petiole. Scape lemon yellow, black at tip, the pedicel black, yellow at tip, the rest of the antennæ black. Segment 5 of abdomen wider than long (cephalo-caudad), the abdominal segments polygonally reticulated. Pubescence

conspicuous only on the antennæ. A more or less obscure brownish area in the disk of each axilla. Caudal tibiæ with two spurs. Antennæ with one (yellow) ring-joint, five funicle joints, the first the longest but yet only somewhat longer than broad; 2 and 3 subequal, a little shorter, subglobose, as long as the pedicel but much larger; remaining two joints a little wider than long.

The male is the same but the abdomen is nearly all black, reddish beneath and very small, ovate, its petiole longer. Joints of funicle petiolate and clothed with long hairs, the distal club joint and the petioles of the funicle yellowish. Scape black. A round brown spot on each side of the meson just ventrad of the occipital margin of vertex; disk of propodeum reddish.

*Habitat*: Brisbane, Queensland. Reared from galls.

*Type*: No. Hy 3225, Queensland Museum, Brisbane. Now reduced to two females on a tag.

This is a somewhat variable species; the upper apex of the eye may be margined with brown. The males vary considerably: All of the venter and sides of abdomen may be yellowish, the two spots near the occipital margin of the head confluent, the lateral portions of the axillæ reddish and the scape yellow; coxæ concolorous with legs, sides of thorax yellow. The abdominal petiole in this sex may be wholly black or else reddish.

#### 19. EURYTOMA NIGRELLA new species. Female.

The same as *queenslandensis* but the abdomen and scape black, the middle of the sides of the former and along the venter obscurely reddish brown; tip of pedicel and ring-joint lemon yellow, the face yellow only beneath the antennal bulbs. Pronotum with a triangular yellowish spot in the lateral aspect at cephalic margin. Legs pale yellowish except caudal coxæ. Brisbane, Queensland. From galls with *queenslandensis*.

*Type*: Lost.

#### 20. EURYTOMA PATRUELLIS new species. Female.

Identical with *queenslandensis* but the hind coxæ are all yellowish (instead of being black on each side) and in the pair of median grooves on the propodeum there are three foveæ, the third (caudal) as long as the other two combined (in *queenslandensis* the third fovea is distinctly shorter than the other two combined). Also the sculpture on the propodeum, just laterad of the middle and caudo-laterad of the median grooves is finer in this species. The umbilicate punctures in all the forms are not confluent, the space between them scaly reticulate; also the axillæ are all black, the margins of the eyes narrowly yellow. Data as with *quadriguttatus*.

The petiole is much longer than wide in *E. xantherella* and *E. nelsonia* but in *patruellis* it is somewhat shorter.

#### 21. EURYTOMA QUADRIGUTTATUS new species. Female.

The same as the preceding but the lemon yellow on propleurum advances onto the pronotum and is plainly visible from above, there are two orange yellow dots in the upper occiput mesad and a more or less obscure yellowish spot on propodeum centrally on each wing. Propodeum at caudal half on each side of median channel somewhat more distinctly punctulate.

The males of both species have the abdomen wholly black and the two dots on the upper occiput confluent.

Compared with types of the allied form.

*Habitat*: Gordonvale (Cairns), Queensland. Reared from galls on forest trees, September, 1913 (E. J. Girault).

*Types*: No. Hy 3226, Queensland Museum, Brisbane, a pair on a tag with two female types of *patruellis*.

**22. EURYTOMA ACACIÆ** Girault. Female; male.

Length, 3.10 mm.

Black, punctate, the wings hyaline; a small pale yellowish area on the lateral aspect of the prothorax, cephalad; legs black, the trochanters, knees, tibiae and tarsi dark brown, the posterior tibiae black centrally. Distal funicle joint and club brownish. Pedicel globular, first funicle joint one and a third times longer than wide, the distal joint subquadrate. Head and thorax pubescent. Petiole of abdomen rugulose. Postmarginal and stigmal veins subequal.

The male measures 3 mm. and is the same but the first joint of the antennal funicle nearly as long as the scape, the pedicels of the joints brownish; antennae 10-jointed, the thick hairs brownish and shorter than the diameter of any of the joints.

*Habitat*: Victoria. From cynipid galls on *Acacia longifolia*.

*Types*: No. Hy 3227, Queensland Museum, Brisbane, one male, two females on a card.

**23. EURYTOMA SECUNDA** new species.

*Female*:—Length, 3 mm.

In my table (if the pale yellow center of the cephalic margin of propleurum is ignored) runs to *pyrrhocerus* Crawford but the antennae are wholly black, the marginal vein distinctly somewhat longer than the postmarginal, funicle 5 is subquadrate, the median channel of propodeum is confused toward tip, the mesopleura densely punctulate along cephalic half, limited caudad by a line of larger punctures, between these and the punctulate portion with a small smooth central area and dorsad with short, oblique sulci, ventrad finely punctulate (the part caudad of the densely punctulate area—except the small triangular ventral portion which belongs to the caudal part—is the mesopleurum); thorax cephalad of the punctulate mesopleurum, umbilicately punctate but the propleurum densely scaly. Abdomen glabrous, segment 4 with a trace of sculpture cephalad, 6 and 7 finely scaly. Petiole of abdomen somewhat longer than wide. Mandibles tridentate. Tips of tibiae and tarsi white, the trochanters and tibiae reddish brown. Hind tibiae with two spurs. Pedicel round; funicle 1 somewhat longer than wide. Thoracic punctures shallow. Postmarginal vein a little longer than the stigmal. The male has the caudal tibiae black except at tips broadly, the petiole over twice longer than wide; the male antennae are 10-jointed, the club distinctly 3-jointed, one ring-joint; distal three funicle joints quadrate, 1 longer, all foliaceous produced along one side, the scape also but suddenly narrowed at tip. Club at tip with a minute fourth joint but this is not articulated.

In the table, this species will run to *acaciæ* from which it differs in having all the tibiae reddish brown. Compared with type *acaciæ*.

From many specimens of both sexes reared from a gall, May, 1914 (H. Hacker) and from the collections of the Queensland Museum.

*Habitat*: Brisbane, Queensland.

*Type*: None designated.

**24. EURYTOMA NYMPHA** (Girault). Female.

*Bephratella nympha* Girault. Genotype.

Length, 3.30 mm.

Bright orange yellow, the dorsum of abdomen with four black stripes across it, the fourth stripe bow-shaped; caudad of it a very small cross dash of dusky at the meson. Median line of propodeum at base with a short smooth groove, the rest of the concave disk roughened nearly as much as the scutum. Ocellar area black. Tip of ovipositor, the base of the scrobes and the dorsal surface of the pedicel black. Wings hyaline. Legs pale yellow, the antennae orange yellow, joint 1 of funicle a little over two thirds the length of the scape (excluding bulla). Marginal vein thickened, about twice longer than broad, the stigmal less than half its length, a little shorter than the postmarginal.

*Habitat*: Gordonvale (type) and Cooktown, Queensland. Jungle.

*Type*: No. Hy 3229, Queensland Museum, Brisbane. Tag and slide.



**25. EURYTOMA PULCHRA** (Girault.) Female.*Bephratella pulchra* Girault.

Length, 3.15 mm.

The same as the preceding but the head with the center of the vertex and upper occiput, median line of pronotum (faintly), a rectangular area at caudal margin mesad of pronotum, somewhat over the cephalic third of scutum (except laterad), median line of latter faintly and a triangular spot connecting with it at apex, the inner caudal corners of each parapside and a small spot at the inner cephalic corner of each, the axillæ, the caudal and cephalic margins of scutellum rather broadly, the scrobicular cavity and the median line of propodeum rather broadly, black. First two funicle joints reddish brown. Abdomen, venation and antennæ about as in *nympha*.

*Habitat*: Gordonvale (type) and Cooktown. Queensland. Jungle.*Type*: No. *Hy* 3230, Queensland Museum, Brisbane. Tag and slide.

A female of this species was captured with one of *nympha* when sweeping in jungle, March 6, 1914 at Cooktown. One of *nympha*, June 25, type habitat.

**26. EURYTOMA SPECIOSA** new species. Female.

Like *pulchra* but no black on propodeum, the axillæ only partly black at mesal apex while the scutum is yellow with two obscure dark spots on it cephalad, one on each side of the meson; the median line of pronotum not obscurely dusky; the black margins of scutellum much shorter. Parapsides all yellow and pronotum except center of face and a spot at meson of caudal margin.

*Habitat*: Gordonvale (Cairns), Queensland. Jungle, August 1, 1913.*Type*: No. *Hy* 3231, Queensland Museum, Brisbane, the female on a tag.**27. EURYTOMA DUMASI** new species. Female.

Length, 2.90 mm.

Black, the antennæ (except club and pedicel above) and femora reddish brown; rest of legs (except the concolorous coxæ) pallid yellowish. Wings hyaline, the marginal vein not thickened, only slightly longer than the slender stigmal. Propodeum with a median channel; funicle joints 2 and 3 subelongate, subequal, each only a fourth shorter than 1; club 2-jointed (though apparently three), the distal joint the longer; funicle 5-jointed. Segment 5 of abdomen occupying not quite half the surface. Funicle 5 a little longer than wide, 1 twice longer than wide.

*Habitat*: Townsville, Queensland. Forest, January 29, 1913.

*Type*: No. *Hy* 3232, Queensland Museum, Brisbane, the female on a tag; a slide with appendages.

**28. EURYTOMA RUBRIVENTRIS** new species of Girault and A. P. Dodd. Female.

Length, 4.10 mm.

Black and punctate, the fifth and sixth abdominal segments blood red (except mesocephalo-dorsad on segment 5); antennal scape suffused with reddish, ring-joint yellow, rest of antennæ black; tegulæ dusky yellow, coxæ black; trochanters, femora and tibiæ reddish brown; tarsi, tips of tibiæ and knees pale lemon yellow. Wings hyaline, the venation golden yellow. Marginal vein distinctly longer than stigmal, the postmarginal as long as the stigmal. Thorax with greyish pubescence. Pedicel no longer than wide; funicle joint 1 distinctly longer than the pedicel, one half longer than wide, 2-4 somewhat shorter, 5 as wide as long. Club as long as the two preceding joints combined. Propodeum with a broad ovate median impression whose interior is finely rugulose; rest of propodeum rugoso-punctate, the impression more or less distinctly carinated along its sides.

*Habitat*: Gordonvale, Queensland, on foliage of *Melaleuca*, October 15, 1913 (A. P. Dodd).

*Type*: No. *Hy* 3233, Queensland Museum, Brisbane, the female on a tag, the head on a slide.

**29. EURYTOMA NIGRIPES** new species. Female.

Length, 3.30 mm.

Black; knees, tarsi, anterior tibiae and antennal scape reddish brown. Wings hyaline, the venation blackish. Marginal vein not distinctly thickened, fully four times as long as wide; stigmal vein two thirds the length of the marginal; postmarginal slightly longer than stigmal. Abdomen pointed at apex, no longer than the thorax; fifth segment the longest, occupying nearly one third of the surface. Disk of propodeum concave. Antennae 10-jointed, one ring-joint, five funicle joints and a 2-jointed club. Funicle joint 1 about two thirds the length of scape (excluding bulla), over twice as long as wide, 2-5 gradually shortening, the fifth somewhat longer than wide; club as long as scape, the first club joint subequal to funicle 5, second club joint one half longer than the first. Posterior tibiae with two spurs. Scape black toward tip.

*Habitat*: Victoria. Labelled "34."

*Types*: In the National Museum, Victoria, two females on a tag; head and the hind legs on a slide.

**30. EURYTOMA FUSCIPENNIS** new species.

*Female*:—2.50 mm.

Black and coarsely punctate, the knees, most of cephalic tibiae and the tarsi reddish brown, the antennae wholly black. Fore wings smoky black except at base, the stigmal vein subequal to postmarginal and a little shorter than the marginal. Funicle joints cylindrical oval, the club 2-jointed, funicle 1 distinctly longer than wide, a little over half the length of the scape; pedicel small, globular, much smaller than distal funicle joint which is over a third shorter than funicle 1, subequal to 2, 3 and 4. Hind tibial spurs double. Cephalic margin of second segment of abdomen rimmed, the fifth segment much the longest. Propodeum rugose, at meson at base with a deep fovea limited laterad by a strong, oblique, short ruga and caudad by a coarse, long, transverse carina which is immediately followed by a deep declivous excavation. Scutum cephalad transversely striate.

From one female captured by sweeping along the edges of jungle, November 1, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3234, Queensland Museum, Brisbane, the specimen on a tag, the head and hind legs on a slide.

**31. EURYTOMA SILVÆ** new species.

*Female*:—Length, 2.75 mm.

Like *pulchra* but the dorsal thorax black except the yellow lateral margins of scutum and scutellum, base of the latter and two narrow oblique yellow streaks on pronotum, one on each side, obliqued in an opposite direction from the parapsidal furrows; lateral margin of parapside also yellow. Propodeum also excepted, being concolorous (yellow). The abdomen bears six cross-stripes of black (five in *pulchra*, the fifth small), the fourth broadest, the first three rather close together, the fifth arcuate (the fourth so in *pulchra*). Antennae with funicle 2 abruptly the shortest, scarcely longer than wide, funicle 1 longest, 3-5 subequal, cylindrical, distinctly longer than wide; pedicel shorter than funicle 2. Two hind tibial spurs; club 2-jointed. Pedicel, funicles 1-3 and side of club fuscous. Disk of propodeum concave.

In *pulchra*, funicle 2 is subequal to funicles 3-5 which are shorter than 1. The abdomen of *nympha* bears five stripes as in *pulchra* (types of *pulchra* and *nympha* re-examined).

Described from one female captured January 16, 1914 by sweeping in jungle (A. P. Dodd.)

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3235, Queensland Museum, Brisbane, the specimen on a tag.

**32. EURYTOMA SARCOPHAGA** new species.

*Female*.—Length, 3 mm.

Very similar to *nigripes* Girault but may be distinguished at once by having funicle 1 shorter, only about half the length of the scape, the hind tibia is less broadly black between the ends, the wings are hyaline, not distinctly stained under the marginal vein, the latter is a little shorter and the concave basin filling the meson of the propodeum is different in sculpture having a more or less distinct median ruga running through the basin and paired cephalad. Segments 2-6 of abdomen in both species glabrous (except in *nigripes* 6 is very finely lined polygonally) and the head and thorax lightly downy. Hind tibiae with two spurs. Valves of ovipositor white at tip.

*Male*.—The same except for the secondary characters, the long abdominal petiole and the lack of the median carina on the propodeal basin; also the distal half of the scape is black. Antennae 10-jointed, the scape swollen.

Described from a number of specimens as follow: Thirteen females labelled "No. 22. Parasitic on psychid larvæ. Darwin, 10-9-13. G.F.H."; one female and two males labelled "No. 20. Parasitic on small lepidop. larvæ. Darwin, 27-9-13."; three males and ten females labelled "No. 23. Darwin, N.T. 11-10-13. From psychid larvæ."; one male, two females labelled "No. 27. Darwin, N.T. 18-10-13," and four females labelled "No. 21. Parasitic on psychid. Darwin, 1-9-13."

*Habitat*: Port Darwin, Northern Territory.

*Types*: No. *Hy 3236*, Queensland Museum, Brisbane, one male, three females on a tag; male and female antennae and female hind legs on a slide.

**33. EURYTOMA SEMIFUSCICORNIS** new species.

*Female*.—Length, 4.10 mm.

Black, the wings hyaline; knees, tibiae, scape and antennae distad of funicle 1, reddish brown; distal half of tibiae and the tarsi whitish; tegulae variable, reddish brown to nearly black. Venation brown yellowish, the postmarginal vein slightly longer than the stigmal, both somewhat shorter than the marginal. Hind tibial spurs double. Funicle 1 elongate, a little over half the length of the scape, 5 shortest, a little longer than wide, subequal to club 1 (which as usual is well-separated from the longer distal joint); club 2 subequal to funicle 2 or 3 both of which are distinctly shorter than 1. Pedicel smaller than any of the joints following. Propodeum punctate, with an ovate median channel which includes transverse foveae; propodeum with white pubescence. Abdomen glabrous, the distal two segments finely reticulated. Thorax not noticeably pubescent. Hind coxa densely scaly.

*Male*.—The same but smaller; antennae 10-jointed, the club 2-jointed, the two joints subequal; funicle and pedicel black, the latter very short. Funicle 5 longer than wide, shortest of the funicle. Funicle 1 about four fifths the length of the scape.

Described from one male, five females labelled "37. Nat. Mus. Victoria. Out of pupa of *Limacodes*."

*Habitat*: Melbourne, Victoria.

*Types*: In the National Museum, Melbourne, one male, four females minutien-mounted; male and female antennae on a slide.

**34. EURYTOMA EPICEPHALÆ** new species.

*Female*.—Length, 2 mm.

Jet black including the coxae and antennae; proximal half of scape or less and rest of all legs rich yellowish-brown. Wings hyaline, the marginal vein distinctly somewhat longer than the stigmal, the postmarginal a little longer than the stigmal. Tips of intermediate and caudal tibiae and the tarsi of the same legs, white. Scape rather short; pedicel subglobular, smaller than any of the funicle joints of which 1 is hardly longer than the following three or four, somewhat longer than wide, somewhat less than half the length of the scape. Hind tibial spurs double. Propodeum with a median concavity which is very finely, densely



punctate and surrounded by the coarse punctures of the rest of the thorax. Head and thorax with short white pubescence. Venter of abdomen reddish ventro-meso-proximad. Abdomen glabrous, finely reticulated after segment 5 dorsad, laterad scaly punctate from segment 3 (on segments 3 and 4 only along cephalic margin).

Described from two females minutien-mounted, reared from *Epicephala frugicolor* (R. E. Turner).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3237, Queensland Museum, Brisbane, the above specimens minutien-mounted and a hind leg on a slide.

### 35. EURYTOMA SCULPTURA new species.

*Female*:—Length, 2.80 mm.

Like *sarcophaga* but segments 4 and 5 of abdomen are short, transverse, 4 a little the longer, the mesopleurum is uniformly punctulate (with longitudinal striæ or rugæ in *sarcophaga* divided centrally by a transverse—ventro-dorsad—narrow ruga); the sides of the abdominal segments 3-5 are distinctly, nearly uniformly reticulate and with minute pin-punctures (fainter and only on most of cephalic part of segments 4 and 5 in *sarcophaga*) except along caudal margins. Differs from *nigripes* in having the wings hyaline, *nigripes* has the reticulated sculpture faintly only on the side of segment 5, the latter in *nigripes* is distinctly much longer (nearly twice longer) than 4 but only moderately long; also in *nigripes* funicle 1 is longer, the mesopleurum caudad is rugulose, cephalad coarsely punctate (in one of the type specimens of *nigripes*, segment 5 of abdomen dorsad is barely longer than 4).

Abdomen above glabrous but segments 3-5 are sculptured as laterad but more faintly; 6 is also similarly sculptured. Propodeum with a deep median channel whose sides are carinated and which narrows distad and at base bears a short median carina. From the sides of this channel, the propodeum slopes and the sloping sides except at base are finely densely punctulate; rest of propodeum coarsely punctate. Scutum uniformly punctate. Thus the propodeum is also different from those of the other two species.

From one female caught March 17, 1914 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3238, Queensland Museum, Brisbane, the female on a tag; antenna and caudal tibiæ on a slide with type *epicephalæ*.

### 36. EURYTOMA GREGI new species.

*Female*:—Length, 2.35 mm.

In my table of species runs to *nelsonia* and allies but differs from all in having the middle and caudal femora plainly black above, their tibiæ more plainly so. Coxæ and rest of legs yellowish-brown. Marginal vein nearly twice the length of the stigmal which is subequal to the postmarginal. Scape yellow brown, blackish at tip above; rest of antenna black. Venation yellow brown, the wings hyaline. Funicle 1 somewhat longer than wide, nearly half the length of the scape, 5 oval. Tegulæ, sides and venter of segment 5 of abdomen yellowish brown, segment 5 as long as half the surface, the petiole about twice longer than wide. Dorsal thorax uniformly shallowly punctate (exceptions given later). Mesopleurum punctulate at cephalic half, longitudinally striate caudal half, with a small yellow area just under tegula. Abdomen wholly glabrous (except the small segments 6 and 7 which are slightly scaly). Propodeum a little more coarsely punctured than the scutellum, with a distinct median channel whose sides are carinated and at proximal half a median ruga runs along its interior. Propleurum more finely punctured than the notum.

From one female caught in October, 1911 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3239, Queensland Museum, Brisbane, the specimen on a tag; hind leg and an antenna on a slide with slide type of *carlylei*.

Dedicated to W. H. Greg.



**37. EURYTOMA QUINQUENOTATA** new species.

*Female*:—Length, 2.50 mm.

Reddish yellow, the wings hyaline, the propleura, abdomen, legs and head yellowish brown; occiput just above center, pedicel, ocellar area and four marks on abdomen, black. Median line of abdomen from base to first mark also black. Abdomen marked somewhat as in *nympha* but the marks do not form distinct cross-stripes (stripes which are much wider than thick) but short and broad stripes which are not more than twice wider than long (first two), the third longer than wide, conical, the narrow end proximad; the fourth marking is much smaller, a small round spot not far from tip. Funicle 1 nearly two thirds the length of the scape, longest, 2 and 3 subequal, a fourth shorter, 4 and 5 subequal, each a little shorter than 3, a little longer than the first club joint; distal club joint distinctly the longer. Pedicel a little smaller than funicle 5 which is a little longer than wide. Venation pale yellow, the thick marginal vein a little over twice longer than wide, the short stigmal and postmarginal veins subequal. Hind tibiae with two spurs. Propodeum with a median channel. Pronotum with a cross-row of three obscure dusky spots, the smallest at meson; pedicel black above at base.

From one female caught in jungle, April 12, 1914.

*Habitat*: Mulgrave River (Gordonvale), Queensland.

*Type*: No. *Hy* 3240, Queensland Museum, Brisbane, the female on a tag; antenna, fore-wing and a hind tibia on a slide.

**38. EURYTOMA ABNORMICLAVA** new species.

*Female*:—Length, 2.80 mm. Abdomen long, subsessile, segment 5 occupying one third of the surface.

Black, umbilicately punctate, the wings hyaline, the abdomen except segments 2, 3 and 7 dorsad and the short petiole, legs, tegulae and scape reddish; knees, tips of tibiae and the tarsi yellowish. Venation pale brown. Cephalic margin of propleurum except ventral third lemon yellow. Head and thorax uniformly punctate. Marginal and postmarginal veins subequal, the stigmal somewhat shorter. Mesopleurum punctulate. Segments 2 and 3 of abdomen at cephalic two thirds and rest of dorsal abdomen distad of them, scaly reticulate. Propodeum with a median channel as in *bicoloriventris* but the median carina or ruga is more distinct and along each side of the channel at caudal two thirds there is a punctulate area; rest of propodeum very rudely punctate. Pedicel reddish yellow beneath. Funicle 1 distinctly longer than wide, not quite half the length of the scape, 2 a little shorter than 1, 5 subglobular. Club solid. Hind tibial spurs double. Ring-joint yellow. Runs in a group to itself after *queenslandensis*.

From one female from the collections of the National Museum of Victoria, Melbourne; "No. 23, S. W. Fulton."

*Habitat*: Pamong (near Murray River), South Australia.

*Type*: No. *Hy* 3241, Queensland Museum, Brisbane, the female on a tag, minutien.

**39. EURYTOMA ROSTANDI** new species.

*Female*: Length, 2.60 mm.

Black, the wings hyaline, the venation black. Runs to *queenslandensis* but the head ventrad of insertion of antennae (higher dorsad on cheeks which are yellow half way up the eyes), cephalic margin of propleurum and proximal third of scape (including the bulla), bright lemon yellow. Abdomen colored as in *queenslandensis*, crimson. Tegulae and legs yellowish brown, the caudal coxae black. Petiole black, twice longer than wide. Postmarginal and stigmal veins subequal, each somewhat shorter than the marginal which is thrice longer than wide. Tips of tibiae and the tarsi white. Funicle 1 somewhat longer than wide, somewhat over half the length of the rather short scape (excluding bulla), 5 a little wider than long, subquadrate. Pro- and mesopleura mostly finely punctulate, the mesopleurum caudad with

short, longitudinal rugæ. Thorax uniformly punctate (the punctures rather shallow) and with rather coarse transverse rugulosity on pronotum and scutum. Cephalic coxa with a black dot centrally laterad. Head punctures distinctly smaller, umbilicate. Segment 5 of abdomen as long as 2.4 united; sides of abdomen glabrous, the petiole at apex with rugæ; dorsal abdomen also glabrous except segments 6 and 7 which are finely scaly. Propodeum nearly perpendicular, distinctly more densely and coarsely punctured than the thorax, with a shallow median channel which is obliterated near apex.

The male has most of the mesopleurum yellow, the head so except upper occiput and the vertex, most of dorsal abdomen black; ventral aspect of caudal coxa yellow.

From one female, three males from the collections of the National Museum of Victoria, Melbourne, reared from galls, March 16, 1910 (F. P. Spry).

*Habitat*: Melbourne, Victoria.

*Types*: No. Hy 3242, Queensland Museum, Brisbane, one male, one female on a tag; female antennæ and a leg on a slide with type slide of *fuscipennis*.

Dedicated to Edmond Rostand.

#### 40. EURYTOMA NIGRINOTATA new species.

*Female*:—Length, 3.20 mm.

Like *quinquenotata* in general color and markings of the abdomen. The following parts black: Ocellar area, upper occiput, caudal margins of pronotum rather broadly across meson, median line of scutum moderately broadly, same of scutellum somewhat more broadly, apex of scutellum broadly, propodeum, petiole, caudal coxa dorsad and the whole of the dorsal meson of abdomen forming a short cross stripe at apex of segment 3, a longer (transversely) one at apex of segment 4, a shorter, arcuate one at apex of 5 and a bottle shaped area just before the short apical black portion, the neck of the bottle proximad. Marginal vein short and thick but about twice the length of the stigmal. Pedicel black above. Funicle 1 about half the length of the scape, somewhat longer than wide. Propodeum broadly concave, the concavity rugulose. Legs pale yellow. Cephalic margin of scutellum very narrowly black. Dorsad segments 5 and 6 of abdomen pin-punctured. Propodeum at apex with a transverse row of three foveæ of which the middle is smallest. Fore wings a little stained under venation.

From one female caught June 3, 1914 in jungle (A. P. Dodd).

*Habitat*: Grafton, New South Wales.

*Type*: No. Hy 3243, Queensland Museum, Brisbane, the specimen on a tag with type of *speciosa*.

#### 41. EURYTOMA SILVENSIS new species.

*Female*:—3.25 mm.

The same as the preceding but the black median line of scutum very narrow and obscure, that of scutellum narrower, cephalic margin of scutellum not black, the lateral margins of propodeum are broadly reddish except for a black spot at extreme cephalo-lateral angle, the caudal coxa is all pale yellowish, the black of meson of abdomen is narrowly broken just caudad of segment 5; the transverse row of three foveæ at apex of propodeum preceded by a transverse fovea. Venation paler.

From one female caught with the preceding.

*Habitat*: Grafton, New South Wales.

*Type*: No. Hy 3244, Queensland Museum, Brisbane, the specimen on a tag with type of preceding species.

#### 42. EURYTOMA TRICOLORIPES new species.

*Female*:—Length, 2.75 mm.

Runs to *bicoloriventris* from which it differs in having the tibiae all reddish yellow, the body is stouter, the side and venter of segment 5 of abdomen reddish (except cephalad and caudad where the black descends half way ventrad) and venter of segment 6; the punctation

is somewhat ruder and segment 5 of abdomen shorter. Tips of tibiae and the tarsi whitish. Otherwise the same. Mesopleurum cephalad punctulate, caudo-dorsad subglabrous, caudo-ventrad punctate. Compared with type of *bicoloripes*. Hind coxa sculptured in both species.

From one female from the Queensland Museum collections, reared from a gall, July 4, 1911 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3245, Queensland Museum, Brisbane, the specimen on a tag.

#### 43. EURYTOMA CRESSONI new species.

*Female*:—Length, 2.75 mm.

Like the preceding but the proximal two thirds of scape (including the bulla) and all legs reddish brown (except last two pairs of coxae and apex and mesal aspect of cephalic coxae); mesal aspect of middle tibiae blackish and also the sides and venter of segments 2-4 of abdomen are reddish. The propodeum, however, differs in that there is no median channel or rather there is one shaped like that of *tricoloripes* but this is not a true channel, not excavated, the surface level or plane and from the center of this "channel" a rather large triangular area bounded by a narrow carina (apex laterad) is impunctate, coriaceous. In my table runs to *lincolni* Girault.

Described from one specimen from same collection and labelled same as the preceding.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3246, Queensland Museum, Brisbane, the specimen on a tag.

#### 44. EURYTOMA DUBIELLA new species.

*Female*:—Length, 2.75 mm. Abdomen from lateral aspect rounded, only a little longer than wide, the petiole short.

Agrees with the description of *lincolni* Girault but the abdomen and legs bright yellowish brown (except coxae; dorsum and sides of segment 2 of abdomen black, dorsum of segments 3 and 4; a minute dot in middle of side of abdomen a little before tip, immediate tip above and sometimes meson of segments 7 and 8; a triangular black spot at proximal half of meson of segment 5, its base connected with the black of segment 4 but not always present). Marginal vein twice the length of the stigmal, the venation pale. The abdomen is not long as in *nelsonia* which has the coxae yellow. Segment 5 of abdomen as long as 2-4 united. Propodeum at meson with a broad trough-like channel. Abdomen dorsad glabrous but segment 5 cephalad obscurely scaly, the following segments more distinctly so. Pubescence silvery. Hind tibial spurs double. Head and thorax punctate, the punctures not deep. Hind coxa and cephalic half of mesopleura punctate; caudal half of mesopleura dorsad glabrous, ventrad subrugulose.

From six females reared from miscellaneous galls from forest.

*Habitat*: Gordonvale (Cairns), Queensland.

*Types*: No. Hy 3247, Queensland Museum, Brisbane, two females on a tag.

#### 45. EURYTOMA BICOLORIVENTRIS new species.

*Female*:—Length, 1.75 mm. Abdomen from lateral aspect plainly longer than wide.

Black, punctate, the wings hyaline; tegulae, knees, tips of tibiae and ventral half of segments 2-5 of abdomen, yellowish brown; also cephalic tibiae except below knee dorsad. Venation black, the marginal vein twice the length of the stigmal, not thickened, the postmarginal a little longer than the stigmal. Pedicel small, round; funicle joints subequal, much larger than the pedicel, oval, shorter than club 2. Mandibles bidentate. Palpi white. Petiole of abdomen a little longer than wide. Punctures of thorax large, rather shallow, uniform on scutum. Propodeum punctured like the thorax, with a broad, ovate median channel whose



median line is a foveate grooved line which is divided at base into two by a longitudinal ruga and which narrows distad; sides of median channel wavy but carinated. Segment 5 of abdomen as long as half the surface, the latter polished. Hind tibiae with two spurs.

From one female taken June 25, 1914 in jungle.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3248, Queensland Museum, Brisbane, the specimen on a tag with type of *nelsonia*.

#### 46. EURYTOMA INCONSPICUA new species.

*Female*:—The same as the preceding but the legs and scape are yellowish brown, the fifth abdominal segment is wholly yellow brown in lateral aspect and the venation is paler, the marginal vein slightly shorter. First two femora slightly blackish dorsad centrally. The propodeum has a rather deep, cylindrical median channel and segments 6 and 7 of abdomen dorsad are more distinctly scaly, the hind coxae barely sculptured (densely punctulate in the preceding species). Hind tibial spurs double. Mandibles not seen. Segment 5 of abdomen occupying about a third of the surface.

From one female caught in jungle, June 25, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3249, Queensland Museum, Brisbane, the female on a tag with type of *bicoloriventris*.

#### 47. EURYTOMA MAETERLINCKI new species.

*Female*:—Length, 2.50 mm.

Runs close to *nigra* but the oral area of face is triangularly lemon yellow, the apex of the triangle reaching antennal insertion, the ventral half of the occipital margin of the eye is yellow, the proximal half of scape (including the bulla) is pale yellow and the apex of the pedicel; otherwise marked as in *nigra* except that all coxae and femora are blackish, the venation black. Marginal vein thickened, distinctly longer than the stigmal. Distal four funicle joints wider than long, 1 somewhat longer than wide. Median carina of median channel of propodeum very distinct. Punctures of thorax all very flat. Mesopleurum about as described for *queenslandensis* but it is divided by a glabrous grooved line, its cephalic margin a carina. Petiole a half longer than wide. Segments 4 and 5 faintly sculptured dorsad. Cheeks black.

From two females reared from gall Nos. 10 and 16, from Queensland Museum collections, April 7, 1911 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3250, Queensland Museum, Brisbane, one specimen on a tag.

Dedicated to Maurice Maeterlinck.

#### 48. EURYTOMA PUELLA new species.

*Female*:—Length, 2.50 mm.

The cephalic tibiae are very lightly blackish dorsad at middle. Flagellum black. Pro- and mesopleurum punctulate. Runs to *acaciae* Girault but differs in having the scape yellowish brown. Mesopleura glabrous dorso-caudad. Cephalic tibiae yellowish brown, also the knees, tip of middle tibiae and distal half of caudal tibiae. The spot on cephalic propleurum is very small. Segment 5 of abdomen not as long as 2-4 combined. Median channel of propodeum well defined its entire length; it consists of a single row of wider than long foveae. Abdomen glabrous except segment 7. Cephalic fifth of scutum finely transversely lineolated.

From two females from the collections of the Queensland Museum, labelled "Among herbage, April 16, 1913. H. Hacker."

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3251, Queensland Museum, Brisbane, one female on a tag.



**49. EURYTOMA LONGIPETIOLATA** new species.

*Female*:—Length, 2.50 mm.

Runs to *rubriventris*. Scape (except at tip), legs except caudal coxæ and ventral half of segments 4 and 5 of abdomen, reddish brown. Wings hyaline, the marginal vein somewhat over twice the length of the stigmal, the latter subequal to postmarginal, the venation pale yellowish brown. Funicle 1 somewhat longer than wide, longest, a little less than half the length of the scape; funicle 5 subglobular. Abdominal petiole longer than usual, distinctly longer than the hind coxæ, about four times longer than wide. Segment 5 of abdomen dorsad occupying over half the surface. Tegulæ very dark. Petiole longitudinally striate, with a spine dorsad at base. Abdomen glabrous except distad of segment 6. Propleurum scaly. Mesopleurum punctulate. Propodeum rugoso-punctate, with a distinct median channel with carinated lateral margin and interiorly consisting of wider than long foveæ, the proximal with indications of longitudinal divisions. Head and thorax uniformly umbilicately punctate. Pedicel wider than long by a little.

From two females from the Queensland Museum collections, Brisbane, caught on flowers of *Bæckea*, April 22, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3252, Queensland Museum, Brisbane, the two specimens on a tag.

**50. EURYTOMA MORDAX** new species.

*Female*:—Length, 3.25 mm.

Like *quinquenotata* but the ocellar area is black (transverse black line) and continued caudad at each end down to the occiput, thus the whole forming an inverted U. The venation is black, the marginal vein longer, plainly twice the length of the stigmal, the latter short, subequal to the postmarginal; the short petiole is black and the abdomen has a median black stripe from base to distal three fourths (to apex of segment 5), the stripe narrowing rapidly from base (never broad) forming nodes at apex of segments 3 and 4, very narrow on segment 5; thus the abdomen has no isolated black areas along the meson. Fore wings very obscurely stained. No obscure spots on pronotum. Otherwise similar to *quinquenotata* (except that the pedicel is black only at base above and funicle 2-5 are longer, only a little shorter than 1, 5 shortest) with which it has been compared (types). Differs from *Eurytoma xantherella* in bearing a distinctly shorter petiole, shorter postmarginal vein and longer median stripe on abdomen. Hind tibial spurs double. Funicle 1 three fourths the length of the scape.\*

From one female caught May 4, 1914 in jungle (A. P. Dodd).

*Habitat*: Tweed Heads (Tweed River), New South Wales.

*Type*: No. Hy 3253, Queensland Museum, Brisbane, the specimen on a tag; antenna and a hind leg on a slide with type *quinquenotata*.

In this species segment 5 of abdomen is shorter being more distinctly deeper than long.

**51. EURYTOMA SPES** new species.

*Female*:—Length, 3 mm.

Runs to *sarcophaga* and *nigripes* but differs from both in having the scape black along distal two thirds (distal half if bulla is included); from *sarcophaga* in that the median basin of propodeum is not rugulose but punctulate and at immediate base of propodeum there is a pair of rounded foveæ separated from each other by a narrow carina; directly laterad of each of these is a smaller fovea, less rounded. Also the cephalic half of the mesopleurum is punctulate, the caudal half subfoveate and with a glabrous area just dorsad of middle. From *nigripes* also in having the basin of propodeum punctulate. Venation black. Tegulæ and cephalic tibiæ dark brown. Cephalic halves of segments 4-6 laterad of abdomen sculptured

\* Excluding the bulla as always.

as in *sculptura*, 7 very finely scaly, pubescent; tips of valves of ovipositor reddish brown; dorsad, segment 6 is nearly entirely scaly like its sides but 5 is so only at cephalic fourth. Propleurum scaly ventro-laterad. Funicle 1 about half the length of the scape. Wings hyaline. Otherwise about as in *nigripes*.

From one female caught November 19, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3254, Queensland Museum, Brisbane, the specimen on a tag; antenna on a slide with slide type of *picus* Girault.

## 52. EURYTOMA MULTIPUNCTUM new species.

Like *nympha* but the distal margin of scutellum, three dots in a transverse line across caudal margin of scutum, one at the meson (the other two, one each at caudo-mesal angle of axilla), a dot at meson of caudal margin of pronotum and one on each side of meson, dorsal half of face of pronotum, reddish black; upper occiput centrally black. Funicle 1 darker but not as dark as the pedicel, the tegulæ very dark red. Mesopleurum longitudinally rugulose.

From one female caught in jungle, June 25, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3255, Queensland Museum, Brisbane, the specimen on a tag with type *nympha*.

## 53. EURYTOMA HAWTHORNEI new species.

*Female*:—Length, 2.70 mm. Robust.

Runs in my table to *epicephale* from the description of which it differs as follows: More robust; all of scape except at tip above and the first two pairs of coxæ are reddish brown; also the tegulæ; the marginal vein is nearly twice the length of the stigmal, the postmarginal barely longer than the stigmal; funicle 1 is hardly a third the length of the scape but distinctly longer than 5 which is subquadrate, hardly shorter than joints 2-4; abdomen wholly black. Median channel of propodeum obclavate, its sides carinated and the channel with a median carina from base nearly to apex. Mesopleurum finely, transversely striate except dorso-caudad. Petiole of abdomen twice longer than wide, nearly as long as the hind coxæ, finely longitudinally striate. Segment 5 of abdomen occupying about half the surface, twice the length of 4. Noticeable grayish pubescence on face, cheeks, dorsal thorax and hind coxæ. Hind tibial spurs double. Venation fuscous.

From one female caught in forest, September 30, 1914.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 3256, Queensland Museum, Brisbane, the female in alcohol with type *Atoposoma unguatipes*.

Dedicated to Nathaniel Hawthorne.

## 54. EURYTOMA BREVIPETIOLATA new species.

*Female*:—Length, about 1 mm.

In my table of species, ignoring the head, runs to *abnormiclava* from which it differs in being smaller, the abdomen (except the short petiole, segments 2-4 dorsad and laterad, segment 5 dorsad at proximal third and the apex distad of segment 6), legs (except hind coxæ and sides slightly of cephalic ones) and the very short scape except at tip above, yellow-brown. Runs in reality to *queenslandensis* and allies, the head bearing a linear spot of yellow on each side of meson of clypeus from mouth to base of antennæ and the propleurum with a roundish yellow spot cephalad centrally. Flagellum blackish, short and thick, the very small pedicel smaller than the funicle joints of which 1 is cupshaped, the following all plainly wider than long. Tegulæ yellowish brown. Venation black, the wings hyaline, the marginal vein a little thickened, somewhat over twice longer than wide, distinctly somewhat longer than the

stigmatal, the latter slightly shorter than the postmarginal. Segment 5 of abdomen occupying not quite half the surface, much longer than 4. Propodeum with a median channel. Mesopleurum very finely sculptured.

From one female caught in forest, September 30, 1914.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 3257, Queensland Museum, Brisbane, the specimen in alcohol with type of *E. hawthornei* Girault.

#### 55. EURYTOMA SOROR new species.

Like *queenslandensis* but the abdomen black above at base only on segments 2 and 3, the venation is very pale yellow, the antennæ are yellow except scape at tip above, pedicel and first two or three funicle joints; the hind coxæ are all yellow-brown like the legs; axillæ black; lower half of occiput yellow. Funicle 1 a little wider than long, the following joints still shorter. Otherwise apparently the same. Marginal vein about twice longer than wide. Hind tibial spurs double.

From one female caught in forest, September 27, 1914.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 3258, Queensland Museum, Brisbane, the specimen in alcohol with type of preceding.

My genus *Bephratella* was founded on the length of the first funicle joint in relation to the scape (two thirds or more the length of the scape), a character used in Ashmead's table but I found later that the joint in question varies very much and is not a true generic differential. The original description of *pyrrhocerus* Crawford was inadvertently omitted but the place of the species is indicated in the table of species. The species *clelandi* Cameron should more properly be referred to *Xanthosoma* Ashmead but perhaps this is not a valid genus being founded on rather variable sculptural peculiarities. This genus is really an enormous one.

#### TABLE TO THE AUSTRALIAN SPECIES OF *EURYTOMA* ILLIGER.

##### FEMALES.

All the species described by me have a 2-jointed club, except *picus* which has three distinct apparent joints and *abnormiclava* which has a solid club. Most of my types have been re-examined.

I. Yellowish species. Funicle 1 long (except *xantherella*), the marginal vein black and thickened. Uniformly punctate on dorsal thorax.

Yellow; abdominal petiole, base of abdomen dorsad along meson for a short distance (proximal third) and tip of ovipositor valves dark fuscous; venation black, the marginal vein nearly twice the length of the stigmal. Propodeum with a median channel. Petiole of abdomen over twice longer than wide. The median stripe of abdomen forms two rather large triangular areas like nodes. Funicle 1 not quite half the length of the scape . . . . . *xantherella* Girault.

Yellow orange; dorsum of abdomen with four conspicuous cross-stripes of black, the fourth bow-shaped and caudad of it a very short transverse black dash; ocellar area black. Propodeum concave, at base with a short groove. Pedicel black dorsad. Funicle 1 two thirds the length of the scape (excluding bulla). Abdomen dorsad not concave (lateral aspect) . . . . . *nympha* Girault; see *multipunctum* Girault.

The same but the centre of vertex, upper occiput, median line of pronotum mesad, somewhat over cephalic third of scutum except lateral margins, the meso-caudal and meso-cephalic corners of each parapside, the axillæ, caudal and cephalic margins of scutellum rather broadly and the meson of propodeum broadly black. Otherwise as in *nympha*. The scutum with an inverted triangular spot at apex mesad connecting narrowly along meson with the black cephalad . . . . . *pulchra* Girault.



The same but propodeum and parapsides wholly yellow, the axillæ only partly black and the scutellum is yellow and bears an obscure dark spot on each side of meson cephalad, the caudal and cephalic margins of scutellum more narrowly black. Pronotum with centre of face and a spot on meson of caudal margin black, rest yellow . . . . .

*speciosa* Girault.

Like *pulchra* but the dorsal thorax all black except lateral margins of scutum and scutellum, base of scutellum and two narrow oblique yellow streaks on pronotum, one on each side; lateral margin of parapside also yellow and the propodeum. Abdomen with six cross-stripes. Funicle 2 abruptly the shortest. Fourth stripe of abdomen curved but broader. The abdomen is long in proportion to its depth . . . . .

*silvæ* Girault.

Reddish yellow, the propleura, abdomen, legs and head yellowish brown; occiput just above centre, pedicel, ocellar area and four short, broad marks on abdomen, the fourth a round spot, black; median line of abdomen from base to first mark also black. Pronotum with a cross-row of three obscure dusky spots, the smallest at the meson. Venation pale. Otherwise about as in *pulchra* but the propodeum with a more distinct median channel . . . . .

*quinquenotata* Girault.

The same but the black ocellar area from each end is continued caudad and ventrad onto the occiput, the venation is black, the marginal vein longer and the meson of abdomen is black from base to the apex of segment 5, the stripe narrowing rapidly. Pronotum without spots. Abdominal petiole not twice longer than wide. Funicle 1 three fourths the length of scape . . . . .

*mordax* Girault; see *nigrinotata* Girault, *silvensis* Girault.

See *Eurytomocharis virginica* Girault.

II. Black species, the body marked with more or less yellow or reddish, the abdomen wholly black. Venation usually normal.

Stigmal vein with an enlarged black knob, as in the Megastigminæ.

Black; cephalic angle of pronotum (lateral aspect) with a yellowish spot; antenna and legs brownish yellow except tip of scape, base of pedicel, caudal coxæ and hind femora centrally. Segment 5 of abdomen occupying half the surface. Marginal vein thickened . . . . .

*eucalypti* Ashmead.

Stigmal vein normal.

Pronotum with an oblong oval yellow spot on cephalic angle (dorsal aspect); scape, apex of pedicel and legs except coxæ and a broad blotch on middle of hind femur, yellowish brown. Venation brown. Funicle joints a little longer than wide . . . . .

*binotata* Ashmead.

Distal half of propodeum, oral region (sometimes broadly), trochanters, knees, tibiæ and tarsi, rufo-testaceous; flagellum without a distinct club, the pedicel twice longer than wide . . . . .

*brachyscelidis* Cameron.

A longish conical mark on each side of clypeus, legs (except coxæ and hind femur) and flagellum pale yellow; pronotum sparsely punctate; cephalic third of scutum finely transversely lined, the rest strongly aciculated, sparsely punctate . . . . .

*tasmanica* Cameron.

A small pale yellow area on cephalic margin centrally of propleurum; distal funicle joint and the club brown; knees, tibiæ and tarsi dark brown, the caudal tibiæ black centrally. Funicle 1 a third longer than wide. Postmarginal and stigmal veins subequal . . . . .

*acaciæ* Girault; see *secunda* Girault, *puella* Girault.

Legs all reddish brown except hind coxa. Scape reddish brown and the tégula; flagellum brownish yellow; propodeum with a rather deep median groove; venation pale; funicle 1 much longer than wide, about half the length of the scape, much longer than 5. Club apparently 3-jointed. Cephalic margin of propleurum centrally pale yellow. Abdominal petiole as long as the caudal coxæ . . . . .

*picus* Girault.



## III. Black species, unmarked (excluding appendages).

Wings distinctly smoky black except at base. Abdomen distinctly longer than deep.

Knees, most of cephalic tibiae and all tarsi reddish brown; funicle joints cylindrical oval, 1 distinctly longer than the others which are subequal. Propodeum at base mesad with a deep fovea. Marginal vein a little longer than postmarginal, the latter and the stigmal moderately long. Dorsal abdomen glabrous except distad of segment 5  
*fuscipennis* Girault.

Wings hyaline or only slightly stained.

Legs all reddish or yellowish except all coxæ. Postmarginal vein a little longer than the stigmal. Thorax uniformly umbilicately punctate. Petiole of abdomen twice longer than wide, the abdomen glabrous.

Antennæ except pedicel above and the club reddish brown; tibiae and tarsi pale yellow; marginal vein only slightly longer than the stigmal; funicles 1-3 subelongate. Propodeum with a median channel, coarsely punctate . . . . .  
*dumasi* Girault; see *epicephalæ* Girault, *hawthornei* Girault.

Tibiae yellowish brown or reddish brown.

Antennæ fulvous except club and pedicel; funicle 1 nearly twice the length of the pedicel, the others shorter; propodeum with a median channel, its sides carinated; marginal vein subequal to postmarginal; cephalic femur yellowish on one side. Segment 4 of abdomen slightly longer than 3 . . . . .  
*pyrrhocerus* Crawford.

Antennæ distad of funicle 1 reddish brown, scape reddish brown; distal half of tibiae whitish; scutum uniformly punctate. Propodeum with an ovate median channel. Funicle 1 a little over half the length of the scape, reddish at tip, over twice the length of the pedicel. Segment 5 nearly twice the length of 4; petiole a little longer than wide . . . . .  
*semifuscornis* Girault.

Antennæ black except scape . . . . .  
*mazzinii* Girault.

Cephalic tibia alone reddish brown. Abdominal petiole wider than long. Marginal vein a little longer than the stigmal. Funicle 5 quadrate, subequal in length to the pedicel.

Caudal tibiae with a broad central black band; funicle 1 about half the length of the scape. Segments 2-6 of abdomen glabrous. Scape reddish brown. Thorax dorsad uniformly punctate . . . . .  
*sarcophaga* Girault.

Scape black . . . . . Compare *aretheas* Walker, *eleuther* Walker, and *spes* Girault.

The same but marginal vein a little longer; funicle 5 somewhat longer than wide.

Scape pale, yellow or reddish. Fore wing a little stained under marginal vein.

Cephalic femur reddish brown; marginal vein fully four times longer than wide, a third longer than the stigmal; propodeum concave. Funicle 1 about two thirds the length of the scape (excluding the bulla). Scape black at tip. Segment 6 of abdomen sculptured . . . . .  
*nigripes* Girault.

Similar to *sarcophaga* and *nigripes* but segments 4 and 5 of abdomen short, subequal, 4 a little longer and the sides of segments 3-5 are more uniformly reticulated . . . . .  
*sculptura* Girault.

Legs all black except articulations and tarsi.

Scape pale . . . . . Compare *tellis* Walker.

Scape black.

Tibiae only with a subfuscous central blotch laterad; funicle submoniliform. Segment 5 of abdomen as long as 2-4 united . . . . .  
*australiensis* Ashmead.

About the same; segments of abdomen subequal . . . . .  
*pidytes* Walker.

- 1V. Black species, the abdomen partly or mostly reddish or yellowish, the body sometimes marked (species with abdomen a little yellowish ventrad at base, excluded).

Head and thorax wholly black.

Legs wholly yellowish or only very slightly infuscated on the femora alone or the tibiae.

Femora and tibiae practically all yellow or reddish.

Abdomen all brown except extreme tip and dorsal meson at proximal third; antennae dusky brown, funicles 1-3 cylindrical oval, about half the length of the scape, the latter lemon yellow; abdomen long, segment 5 occupying half the surface; petiole nearly twice longer than wide, black; venation pale, the marginal vein nearly twice the length of the stigmal. Propodeum with a deep median channel with carinated margins; propodeum rugoso-punctate; caudal coxa scaly above . . . . . *nelsonia* Girault.

Abdomen all black except segment 5 which is dark reddish, black at proximal third dorsad; marginal vein about twice longer than wide, the venation pale; funicles 4 and 5 wider than long. Segment 5 of abdomen plainly longest. Ventral part of segments 2-4 of abdomen red; petiole wider than long. Propodeum with the mesal aspect a shallow basin densely punctate, the rest rugoso-punctate . . . . . *flavitegula* Girault.

Abdomen black except segment 5 (which is black along dorsal meson) and sides of 6 which are bright honey yellow; scape lemon yellow except at tip above; petiole of abdomen thrice longer than wide; marginal vein nearly twice the length of the stigmal; funicle 1 a little over half the length of the scape, somewhat longer than wide. Mesopleurum with a glabrous area just ventro-caudad of tegula, cephalad of this a few fine punctures, ventrad of the latter weak longitudinal aciculations . . . . . *carlylei* Girault.

The same but yellow of abdomen dark yellow and only at ventral half of side. Petiole of abdomen only a little longer than wide, the dorsum not greatly convexed. Funicle 1 oval, less than half the length of the scape. Postmarginal vein barely longer than the stigmal. Propodeum with a distinct median channel, carinated cephalad along margins; thoracic punctures shallower. Marginal vein shorter . . . . . *inconspicua* Girault.

Femora and tibiae plainly marked with black. Propodeum with a distinct median channel; abdominal petiole twice longer than wide; scape and segment 5 of abdomen laterad yellow-brown . . . . . *gregi* Girault.

Legs yellow or reddish but all coxae black.

Abdomen reddish except at proximal third dorsad, the scape brownish at extreme base; petiole of abdomen black . . . . . *lincolni* Girault, *dubiella* Girault, *ressoni* Girault.

Abdomen with segments 5 and 6 blood red (except meso-cephalo-dorsad on segment 5); legs reddish brown, the scape suffused with yellow; funicle 1 over half longer than wide. Scutum uniformly punctate. Segments 3-5 of abdomen covered with very fine pin-punctures dorsad and laterad. Petiole very short. Pro- and mesopleurum delicately punctate; caudal half of mesopleurum with weak longitudinal ridges . . . . . *rubriventris* Girault and Dodd; see *longipetiolata* Girault.

Legs yellow but coxae, femora and nearly all tibiae black.

Tegulae, knees, tips of tibiae (most of cephalic tibiae) and segments 2-5 of abdomen yellowish brown. Marginal vein twice the length of the stigmal; funicle joints oval. Mandibles tridentate. Propodeum with an ovate median channel . . . . . *bicoloriventris* Girault; see *tricoloripes* Girault.

Head and thorax marked distinctly with yellow.

Head marked with yellow.

Oral region, ventral aspect of scape, lower half of upper inner orbits, malar space and propleura, rufo-testaceous; legs yellow except caudal femora which are black, other femora slightly blackish; marginal vein distinctly longer than the post-marginal; funicle 1 twice longer than wide. Venter and ventral half of sides of abdomen testaceous; scutellum with a median aciculated line . . . . .

(*Xanthosoma*) *clelandi* Cameron.

Abdomen reddish except above at proximal third (segments (2-4); face, cheeks and propleurum lemon yellow, also occiput except dorsad; legs yellowish brown, the caudal coxa black laterad except at tip and the abdominal petiole; scape lemon yellow, black at tip; funicle 1 a half longer than broad. Petiole a little longer than wide. Prepectus glabrous; mesopleurum cephalad punctate (the greater part), caudad longitudinally striate. Median channel of propodeum with carinated sides and a distinct median ruga. Propodeum coarsely punctate . . . . .

*queenslandensis* Girault; see *soror* and *brevipetiolata* Girault.

The same but caudal coxa yellow . . . . . *patruelis* Girault.

The same but the yellow of propleurum advances on to the notum; two orange yellow dots mesad on upper occiput and a dot on each side of propodeum between meson and lateral margin . . . . . *quadriguttatus* Girault; see *rostandi* Girault.

Face beneath antennæ and cephalic margin of propleurum triangularly, lemon yellow; venter and middle of side of abdomen yellowish brown; caudal coxæ and scape black. Prepectus finely scaly. Mesopleurum about as in *queenslandensis*, also propodeum and other characters . . . . . *nigrella* Girault, *maeterlincki* Girault.

Head all black.

Club solid. Abdomen mostly red, also the legs and scape . . . *abnormiclava* Girault.

#### GENUS CHROMEURYTOMA Cameron.

"Antennæ short, clavate, apparently\* 13-jointed, placed over the mouth, the last joints forming a club. Apex of clypeus rounded. Face roundly convex, clearly separated laterally, below separated from the clypeus by a furrow. Head distinctly wider than the thorax. Eyes large, widely separated above, not converging. Temples short. Prothorax large, quadrate, as long as the mesothorax, which has distinct furrows; these are straight and converge toward the apex. Scutellum large, longer than it is wide at apex; that is broadly rounded and margined. Postscutellum large, narrowed gradually behind. Metanotum short, little developed, the centre depressed narrowly, the sides broadly rounded, the slope oblique. There is an oblique furrow across the mesopleuræ. Abdomen shorter than thorax, longish oval, distinctly narrowed at base and apex, not petiolated. Marginal nervure long, the postmarginal longer than it; stigmal fully one-half the length of the marginal. Legs stout, pilose. Body metallic-green; its sculpture fine.

I can refer this genus only to the Eurytominae, but it is certainly not typical of that group. The marginal nervure, for example, is much longer, the sculpture much finer, and the antennæ shorter and more clavate. I cannot place it in any other group. The metallic color is not unique for the Eurytominae, for it is found in *Chryseida*. In habits, the type of the genus agrees with most Eurytominae, the species of the tribe being mostly parasitic on gall-insects. Probably the discovery of the male may throw light on the systematic position."

\* This is a word which should be used as little as possible in such connections as this; it is obscure where it should be clear.



**1. CHROMEURYTOMA CLAVICORNIS** Cameron. Female. Genotype.

Length, 4.5 mm.

“Dark green, largely tinted with blue, and to a less extent, with violaceous; antennæ and legs, except the coxæ, rufo-testaceous; mandibles and palpi testaceous; wings hyaline, nervures pale testaceous.

Vertex below the ocelli finely, closely striated; apex of pronotum, mesonotum and scutellum finely, closely striated, the striation stronger on the scutellum, weaker on the base of mesonotum; postscutellum microscopically striated, the parts bordering it fiery-red. Metanotum smooth. Metapleuræ fiery-red. Abdomen smooth. Apex of pronotum narrowly fiery-red. There is a wide curved furrow on the malar space. Ventral surface of the abdomen largely violaceous.

I am not sure but that the deep rufous tint of the legs may be caused by discoloration through the action of cyanide of potassium.”

This is probably one of the gall-inhabiting *Perilampidæ*.

GENUS *XANTHEURYTOMA* Cameron.

“Submarginal vein twice the length of the marginal, thickened toward apex, marginal thickened, postmarginal not one half the length of marginal, not longer than stigmal, which is triangularly thickened at base, at its junction with the marginal, the lower part of it narrowed, roundly curved. Antennæ 11-jointed, short, thick, joints of flagellum wider than thick, not distinctly separated, at the most only pilose; the scape narrower than flagellum and does not extend much above the middle of the eyes; there is no clear club to the antennæ; the front is not much depressed.

Ocelli almost in a straight line, the central very little in front of the lateral. Parapsidal furrows clearly defined, rounded, meeting very shortly before base of scutellum. Scutellum large, longish-pyriform, the broad end at the apex; almost as long as the mesonotum. Metanotum short, steeply oblique; the centre with a keel on one side, the two parallel, not converging. Thorax not punctured, only very finely striated above. Abdomen sessile, distinctly shorter than thorax; its second segment much longer than the others; its apex bluntly rounded, broad; fifth segment shorter than fourth.

Comes near to *Xanthosoma* Ashmead which may be known from it by the fifth abdominal segment in the female being nearly twice as long as the fourth, by the abdomen being longer than the thorax, and by the marginal vein being one and a half times, not twice longer than the stigmal. The parapsidal furrows are deeper, more clearly defined and more roundly curved than in *Eurytoma*; the scutellum is larger and much more narrowed at base than in that genus.”

**1. XANTHEURYTOMA FLAVA** Cameron. Male. Genotype.

Length, 2 mm.

“Yellow; back of thorax deeper, more fulvous in tint; centre of the whole of basal slope of pronotum and the thoracic sutures more or less black, flagellum of antennæ tinged with fulvous, legs a paler yellow than the body; wings hyaline, nervures testaceous, the dilated parts darker colored; stigmal vein triangularly dilated at base, the apical part a little longer than it, roundly curved. The metanotum and back of abdomen may be infuscated.

Occiput transverse, infuscated, more or less obscurely striated. Hinder ocelli separated from each other by twice the distance they are from the eyes. Mesonotum and scutellum finely, closely, transversely striated. Parapsidal furrows distinct, roundly curved toward each other at apex, where they unite and are joined to the scutellar furrow by a short one. Scutellum large, ovate, twice longer than wide, obliquely narrowed to a point at the base, the apex broadly rounded.

Probably a variable species, as regards the amount of black.”

Probably a *Taneostigmine*.



## GENUS LISSEURYTOMA Cameron.

"Marginal vein thrice longer than the stigmal, postmarginal shorter than the latter, the stigmal branch as long as stigmal, its apex slightly thickened, oblique. Head and thorax not umbilicately punctate, smooth, parapsidal furrows distinct; scutellum large, narrowed toward base, the apex broadly rounded, margined by a keel. Abdomen with the basal segment sessile, longer than any of the others, the second to fifth of almost equal length. Metanotum flat, triangular, its sides stoutly keeled, the middle with two fine keels. Eyes ovate, the lower side more sharply pointed than the upper; malar space two thirds of their length. Antennæ 12-jointed, stout, third joint conical, longer than wide, fourth and fifth as wide as long, the others wider than long. Legs stout, hinder tibiæ with one spur.

The thorax is longer than usual, but not the pronotum; it is fully one-half longer than the abdomen; the flattened, only slightly sloped metanotum adds to its length. The head is transverse behind; the temples are very slightly developed. The ocelli are in a wide triangle, in almost a curve.

A distinct genus. The single spur on the hind tibiæ separates it from all the other described genera, except *Phylloxeroxenus*, but that has the thorax umbilicately punctate. The pronotum is not quite so largely developed as it is in *Eurytoma*, and is more distinctly narrowed at the base."

**1. LISSEURYTOMA VIOLACEITINCTA** Cameron. Male. Genotype.

Length, 4 mm.

"Black, abdomen distinctly violaceous, base and apex of tibiæ obscurely, and tarsi, testaceous; wings hyaline, nervures black, an obscure cloud, of transversely oval shape before the stigmal branch. Pro- and mesothorax opaque, pro- and mesonotum very closely, finely, transversely striated in front. Metanotum smooth shining.

The hair on the legs and metapleuræ is longer than elsewhere; that on the legs is long, white and sparse. Hind tibiæ flattened, broader than the others; metatarsus as long as second and third joints united, and a little shorter than the apical. The apex of the antennal scape does not reach much beyond the middle of front, nor do the antennal depressions.

*Habitat*: Gosford, New South Wales."

## GENUS SYSTOLE Walker.

**1. SYSTOLE KOEBELEI** Ashmead. Female.

Length, 2.5 mm.

Robust, brownish yellow and sparsely pubescent; stemmaticum, occiput, pedicel of antennæ, except narrowly at apex, anterior margin of mesonotum and sutures dividing sclerites of thorax, black. Wings hyaline, pubescent, the veins brown, the subcostal vein interrupted by a white bulla at its junction with the marginal vein; marginal and postmarginal veins about equal, longer than the stigmal. Head viewed from above subglobose, with scrobes deep and extending nearly to front ocellus; pedicel obconical, twice and one half longer than thick at apex; flagellum clavate, first three joints very small, together shorter than the pedicel and very much narrower, moniliform, the joints beyond widening and wider than long. Thorax rugulose, except the black anterior portion of mesonotum which is smoother but with delicate transverse aciculations. Abdomen oval, finely coriaceous and sparsely pubescent, the segments after the second subequal in length.

*Habitat*: Australia.

*Type*: No. 4882, United States National Museum, Washington, D.C., U.S.A.

**2. SYSTOLE OPUS** Girault. Female.

Length, 1.10 mm.

Black, the wings hyaline, the antennæ concolorous, also the coxæ and most of all femora the tibiæ and tarsi yellowish brown; third and fourth abdominal segments smooth, the next

segments scaly, the fifth (which is equal to the preceding) so only along proximal half; head and thorax scaly but there are large, shallow punctures scattered over the surface resembling pustules. Wings hyaline, the postmarginal vein slightly shorter than the others which are subequal. Antennæ 11-jointed, the 3-jointed club obliquely truncate from apex of first joint, the pedicel longer than the first funicle joint, all joints of the latter about cup-shaped and subequal; one ring-joint. Posterior tibiæ with two spurs. Parapsidal furrows complete.

*Habitat*: Cairns, Queensland.

*Type*: No. I. 1353, South Australian Museum, Adelaide.

#### GENUS EURYSYSTOLE Girault.

Agreeing with *Systole* Walker but the abdominal segments not subequal, the fourth over thrice the length of the third, longer than wide, very long, occupying more than a half of the surface. The thorax is scaly and with scattered shallow punctures as in *Systole opus*. Posterior tibiæ with only one spur. Parapsidal furrows complete. The punctures on the thorax are rather numerous, shallow.

##### 1. EURYSYSTOLE VULGARIS Girault. Female.

Length, 1.45 mm.

Black, the wings hyaline, the venation very pallid yellow, the postmarginal vein somewhat shorter than the stigmal; the antennæ pale yellow, the pedicel dusky; legs honey yellow. Eleven antennal joints, one ring-joint, the first funicle joint subequal to the pedicel, only slightly longer than wide, the others subequal to it or a little shorter; club 3-jointed, larger, obliquely truncate. Pronotum with a more or less obscure yellowish spot in the lateral aspect, cephalo-ventrad. Third and following abdominal segments more or less distinctly scaly. Cephalic ocellus not within the scrobicular cavity. Knees, tips of tibiæ and the tarsi white.

*Habitat*: Cairns, Queensland.

*Type*: No. I. 1351, South Australian Museum.

##### 2. EURYSYSTOLE NIGER new species. Female.

Length, 1.40 mm.

Like *vulgaris* but the legs darker except knees, tips of tibiæ and the tarsi. Segment 5 of abdomen not quite thrice the length of segment 4. Scutum with transverse lineolations, the scutellum very finely scaly. Otherwise the same. Mandibles tridentate. Coxæ black. Hind tibiæ with one spur. Clypeus yellow. Legs yellowish brown. Marginal vein somewhat longer than the stigmal, the latter a little shorter than the postmarginal. Distal half of segment 5 of abdomen scaly dorsad. Meson of propodeum with two large areas along it bounded by carinæ.

*Habitat*: Capeville (Pentland), Queensland. Forest, January 8, 1913.

*Type*: No. Hy 3260, Queensland Museum, Brisbane, the female on a tag.

#### GENUS XANTHOSOMA Ashmead.\*

##### 1. XANTHOSOMA JUSTITIA new species. Female.

Length, 1.10 mm. Club 2-jointed, the distal joint much the longest.

Black, the wings hyaline, the legs pale yellow except the coxæ and proximal parts of the femora (all of hind femur and base of hind tibia); antennæ dusky-pale yellow, the scape and pedicel black, the first funicle joint longest, slightly longer than wide and slightly shorter than the pedicel, the distal or fifth funicle joint wider than long. The two posterior

\* See remarks under *Eurytoma*.

tibial spurs slender, nearly colorless. Mandibles tridentate, the inner tooth shorter and rather broadly truncate. Thorax densely, finely scaly. Propodeum without a distinct median impression, scaly and finely rugulose, brown. Propleurum suffused with yellowish.

*Habitat*: Gordonvale (Cairns), Queensland. Reared from galls, December 12, 1912 (A. P. Dodd). Forest.

*Type*: No. *Hy* 3261, Queensland Museum, Brisbane.

## 2. *XANTHOSOMA PULCHRICORPUS* new species. Female.

Length, 2.20 mm.

Honey yellow, the dorsum of the abdomen with broad nearly confluent black stripes across it, the scutellum and propodeum black, also the area bounded by the ocelli and a large rounded spot at base of scutum centrally. Wings hyaline. Antennæ and legs honey-yellow. First funicle joint subequal to the pedicel which is fuscous; club only 2-jointed, apparently 3-jointed. Marginal vein stout; fifth segment of abdomen a half or less longer than the fourth. Propodeum with a distinct median channel with carinated sides. Hind tibiæ with two spurs. Margins of scutellum yellow, also segment 2 of abdomen, the latter glabrous. Funicles 2.5 wider than long.

*Habitat*: Magnetic Island, Townsville. Forest, January.

*Type*: No. *Hy* 3262, Queensland Museum, Brisbane, the female on a tag, a caudal tibia and portion of an antenna on a slide.

## 3. *XANTHOSOMA HAECKELI* new species. Female.

Length, 1.60 mm.

Black, the wings hyaline; legs and petiole straw yellow; abdomen at base above (most of segment 2), beneath and along sides at proximal half, sides and venter of thorax (except the last region), parapsides and axillæ (both the latter darker), reddish yellow. Thorax rather densely finely reticulately lined, the propodeum with a broad, scaly, longitudinal mesial path, not impressed, limited laterad by a distinct carina; rest with several irregular rugæ. Face and cheeks lemon yellow; antennæ black, the scape yellow, funicle joints all somewhat wider than long, except the first which is subquadrate, subequal to the pedicel. Second tooth of mandible broadly, concavely truncate, nearly forming two teeth. One spur of hind tibia much shorter. Antennæ 9-jointed, the club not truly divided in the usual place; one ring-joint. Propodeum sparsely rugulose. Fifth abdominal segment somewhat the longest. Postmarginal vein a little shorter than the stigmal which is a half shorter than the somewhat thickened marginal. Petiole somewhat longer than wide. Scutum and scutellum with a number of obscure pustule-like punctures.

*Habitat*: Gordonvale (Cairns), Queensland. Jungle, June 5, 1913 (A. P. Dodd).

*Type*: No. *Hy* 3263, Queensland Museum, Brisbane, the female on a tag and a slide bearing the head and a hind leg.

## GENUS *AXANTHOSOMA* Girault.

Like *Xanthosoma* Ashmead but the abdomen plainly twice the length of the head and thorax combined. Allied with *Aximogastra* Ashmead but abdominal segments less equal, the abdomen beyond the seventh segment produced into a thin setiform process as long as the head and thorax combined; segments 5 and 6 are about equal, long, each about twice the length of 4. Head and thorax not umbilicately punctate only finely transversely wrinkled. Stigmal and postmarginal veins unequal. Segment 6 of abdomen a little longer than segment 5. Hind tibiæ with two spurs. First funicle joint longer than the pedicel, only about two thirds the length of the scape; a few scattered thimble punctures on the propodeum. Antennæ 10-jointed.



**1. AXANTHOSOMA NIGRA** Girault. Female. Genotype.

Length, 4.78 mm.

Shining black, the wings hyaline, the head and thorax more or less opaque. Legs yellow-brown, the coxæ mostly, the posterior femora and their tibiæ below the knees, black; also the antennæ. Abdomen except at base above densely microscopically scaly, the thorax more roughly so. Propodeum rugose and with a large median, triangular excavation for its whole length. Distal funicle joint oval. Club 2-jointed, the distal or second suture really non-existent. Propodeum with a distinct median channel whose margins are not distinctly carinated. Abdomen sub sessile.

*Habitat*: Kuranda (type) and Gordonvale, Queensland.

*Type*: No. *Hy 3264*, Queensland Museum, Brisbane, a female on a tag and a slide bearing the antennæ and legs.

**2. AXANTHOSOMA IO** new species. Female.

Length, 3.50 mm.

Like *nigra* but the legs black except knees, tips of tibiæ and the tarsi. Also shorter and more robust, the produced part of the abdomen *shorter* than the head and thorax combined. Abdomen a little reddish at sides near base. Sides of thorax uniformly scaly. Median channel of propodeum narrower.

*Habitat*: Magnetic Island (Townsville), Queensland. Forest, January.

*Type*: No. *Hy 3265*, Queensland Museum, Brisbane, the female on a tag and a slide bearing the head and hind legs.

## EXANTHOSOMA new genus.

*Female*:—Like *Xanthosoma* Ashmead but the antennæ only 9-jointed, the club solid. Fifth abdominal segment much shorter than wide yet longest, twice longer than 4 which is much shorter than segment 2. Postmarginal vein a little longer than the stigmal. Propodeum with a narrow median channel. Hind tibiæ with two spurs.

**1. EXANTHOSOMA FUNERALIS** new species.

*Female*:—Length, 2.75 mm.

Black, the wings hyaline; trochanters, knees, distal third of cephalic femora, all tibiæ except the subfuscous middle and the tarsi, reddish brown. Scape yellowish brown, the antennæ otherwise black; ring-joint longer than wide, narrow, the first funicle joint somewhat less than half the length of the scape (excluding bulla), the distal funicle joint globular, about as long as the pedicel. Mandibles irregular. Thorax densely reticulated, the propodeum rugulose, the median channel a single line of foveæ and its margins carinated. Scutum and scutellum with scattered obscure punctures.

From one female captured by sweeping jungle along a forest streamlet, July 31, 1913.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. *Hy 3266*, Queensland Museum, Brisbane, the specimen on a tag; head and a hind leg on a slide.

The abdomen has segments 4, 5 and 6 at about cephalic half dorsad, scaly reticulate; the petiole is subobsolete. As seen from above the scutellum is just about as long as the propodeum.

## GENUS EURYTOMOCHARIS Ashmead.

**1. EURYTOMOCHARIS VIRGINICA** new species. Female.

Length, 2.80 mm.

Red, the wings slightly stained throughout. Ocellar area, occiput, segments 2-4 of abdomen at caudal margins, cephalic margin, median channel and apex of propodeum, petiole



of abdomen, cephalic margin of scutum, venter of meson and metathorax, black. Venation pale yellowish, the marginal and stigmal veins subequal, the postmarginal nearly as long as the stigmal. Propodeum coarsely punctate, with a median channel of a paired row of foveæ. Abdominal petiole somewhat longer than wide, the abdomen dorsad finely reticulated (except segment 2 and caudal halves of 3 and 4), the segments nearly as in *Eurytoma*. Hind tibial spurs double. Antennæ inserted about the middle of the face, 10-jointed, the club 2-jointed, the distal joint larger, one ring-joint; first funicle joint longest, a little less than half the length of the body of the scape, the fifth or last joint a little wider than long. Mandibles tridentate. Scape (except at tip above), pedicel (except above) and legs reddish yellow, the funicle and club dark brownish; knees, tips of tibiæ and four proximal tarsal joints pallid. Cephalic half or more of mesopleurum black, the region punctulate cephalad.

*Habitat*: Gordonvale (Cairns), Queensland. Forest, October 10, 1912.

*Type*: No. Hy 3267, Queensland Museum, Brisbane, the female on a tag and the head, caudal tibiæ and a fore wing on a slide.

The species is very close to *Eurytoma* and differs from the original description of that genus in having the fifth abdominal segment as viewed from the side distinctly higher than long.

#### GENUS PHYLLOXEROXENUS Ashmead.

##### 1. PHYLLOXEROXENUS FUSCIPENNIS Girault. Male.

Length, 3.75 mm.

Reddish yellow, the antennæ, the legs (including coxæ) and the face honey yellow; propodeum, the abdomen with its long petiole, cephalic margin of mesonotum, the center of the occiput, dorsad and the area containing the ocelli black, the marginal vein fuscous; submarginal vein mostly pallid. Fore wing smoky out to beyond the end of the stigmal vein from base, the area accented under the marginal vein and interrupted by several longitudinal false veins. Umbilicately punctate. Mesopleurum more or less black. Marginal vein thickened, nearly twice the length of either the stigmal or postmarginal, which are short and subequal. Antennæ 10-jointed, one large ring-joint, the joints following long and cylindrical, subpedunculate, the distal funicle joint only about two thirds the length of the proximal, shortest of the funicle, shorter than the club joint. Posterior tibia with one spur.

*Habitat*: Cairns, Queensland.

*Type*: No. I. 1260, South Australian Museum, Adelaide.

#### GENUS PHYLLOXEROXENOIDES Girault.

Differing from *Phylloxeroxenus* Ashmead, in having the funicle joints of the antennæ transverse after the first; antennæ 11-jointed. Posterior tibiæ with one spur.

##### 1. PHYLLOXEROXENOIDES NIGER Girault. Female. Genotype.

Length, 2.50 mm.

Black, the abdomen shining, the wings hyaline, the postmarginal and stigmal veins nearly equal; pronotum with a yellowish spot on each side, cephalad; venation pallid. Abdominal petiole short but distinct. Legs, except the coxæ proximad, and the scape, except toward the tip, reddish brown, the flagellum reddish brown distad of the third funicle joint, clavate; first funicle joint subquadrate, not quite as long as the pedicel; other funicle joints subequal in length but widening. Club ovate, wider than the funicle, its first joint over twice wider than long. Posterior femur nearly all black.

*Habitat*: Mount Tambourine, Queensland.

*Type*: No. I. 1263, South Australian Museum, Adelaide.

## GENUS BRUCHOPHAGUS Ashmead.

1. **BRUCHOPHAGUS NIGER** Girault. Female.

Length, 2.85 mm.

Black, the wings hyaline, the venation pallid; abdomen smooth and shining, the fourth and fifth segments longest, the fifth somewhat longer than the fourth, either much longer than any of the others, the sixth transverse. Antennæ 11-jointed, the club enlarged, black, the scape fulvous, the first funicle joint twice the length of the pedicel and longest, the funicle joints bevelled off at each end along one side. Knees, tips of tibiæ and tarsi pallid yellow.

*Habitat*: Mount Tambourine, Queensland.

*Type*: No. I. 1261, South Australian Museum, Adelaide.

2. **BRUCHOPHAGUS INCONSPICUUS** new species.

*Female*:—Length, 2 mm. Stigmal vein slightly shorter than the marginal, the latter subequal to the postmarginal.

Black, the knees, tips of tibiæ and tarsi white; base of scape reddish brown; wings hyaline, the venation pallid; club suffused with yellowish. Maxillary palpi blackish, its distal, fourth joint pallid, nearly as long as the others combined. Mandibles tridentate. Funicle moniliform, the first joint slightly longer than wide, the others subequal, rounded, subequal in length to the pedicel. Club 2-jointed, the distal joint much the longest. Hind tibial spurs double. Umbilicately punctate, the propodeum rugose, with a distinct median channel (rather shallow) with carinated margins and an irregular median longitudinal ruga down it; on each side of the median channel the propodeum is scaly, especially centrally. Hind coxa coarsely scaly. Abdomen glabrous; from lateral aspect, distinctly longer than wide, segments 4 and 5 unequal, 5 somewhat longer but distinctly shorter than 2-4 united; cephalic margins of 4 and 5 with scaly reticulation, 6 (transverse-linear) and 7 (large) nearly entirely so (dorsad). Pubescence silvery, not conspicuous. Scape over twice the length of funicle 1.

From one female caught June 25, 1914 in forest.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3268, Queensland Museum, Brisbane, the female on a tag.

## TRIBE DECATOMINI.

## GENUS EUDECATOMA Ashmead.

1. **EUDECATOMA JUSTITIA** new species. Male.

Length, 1.75 mm.

Reddish yellow, the legs and antennæ honey yellow, the antennæ paler. Propodeum, all of abdomen except segment 4 which is suffused with yellowish and the caudal coxæ and femora, black, the venation also black. Scutellum dark brown. Thorax impunctate, finely reticulated. Antennæ with long setæ, more or less whorled.

*Habitat*: Magnetic Island, Townsville. Forest, January.

*Type*: No. Hy 3269, Queensland Museum, Brisbane, the male on a tag.

2. **EUDECATOMA FERALIS** new species. Female.

Length, 1.10 mm.

Yellowish brown, impunctate, the marginal vein concealed by a stigmated spot; legs concolorous, the flagellum dusky black; mandibles tridentate; scape yellow-brown. Antennæ 11-jointed with one ring-joint, the club 3-jointed, the pedicel somewhat swollen, the first funicle joint longest, obconical, not as long as the pedicel, the others more or less quadrate. (Abdomen lost.)

*Habitat*: Meerawa (Cairns), Queensland. Jungle, July 26, 1913.

*Type*: No. Hy 3270, Queensland Museum, Brisbane, the female on a slide.

**3. EUDECATOMA PAUCIPUNCTATA** new species.

*Female*:—Length, 3 mm.

Honey yellow, the wings hyaline, the pronotum latero-cephalad yellow. Abdomen with about four cross-stripes, each slightly darker than the ground color, shaped as in *Eurytoma*. Thorax finely polygonally reticulated, the pronotum, caudal two thirds of scutum, scutellum except mesad and inner margin and lateral half of parapsides with thimble punctures, more numerous on scutum; cephalic third of scutum very finely transversely lined and caudad (just caudad of the punctures) with an ocellus-like pimple. Propodeum with a uniform median channel with cross-carinæ within; also a median carina which forks at base (cephalad), each arm running latero-caudad about half way to lateral margin, then abruptly changing angle, running caudo-mesad to caudal margin, thus inclosing a large peltate area through whose center runs the median channel. Propodeum rugulose. Abdomen glabrous, near apex with slight reticulation. Closest to *feralis* Girault but that species is impunctate and has a 3-jointed club; also in this new species funicle 1 is longer than the pedicel (the club plainly 2-jointed). Differs from *justitia* in color and also in having the evident punctures on the thorax, *justitia* having but very obscure ones on caudal scutum and its propodeum bears a broader median channel with less distinct cross-carinæ and there is no median carina (the channel's lateral margins are carinated and there is a longitudinal carina just laterad). Antennæ 10-jointed, the club 2-jointed, one ring-joint. Funicle 5 quadrate, 1 longest, less than half the length of the slender scape. Tibial spurs double (hind legs). Petiole twice longer than wide.

Described from one female taken from a window, February 4, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3271, Queensland Museum, Brisbane, one female on a tag, the head and a hind leg on a slide.

**4. EUDECATOMA DECATOMOIDES** new species. Female.

Length, 2.20 mm.

This species differs from the preceding in being umbilicately punctate as in *Eurytoma*. The propodeum is foveate-punctate and with a median channel as in *paucipunctata* except that there is a paired row of wider than long foveæ within it. The carinæ in the meson are less obvious. There are two small eye-spots of yellow on base of abdomen dorsad. Abdomen glabrous, its petiole black, about twice longer than wide.

Honey yellow, the wings hyaline; face of pronotum slightly, an obscure round spot on scutum at meson of cephalic margin, apex of scutellum, median channel of propodeum, petiole and dorsal aspect of abdomen except just before tip, black. Marginal vein barely longer than wide, stigmated as normal for this tribe, the postmarginal no longer than the stigmal, both shorter than the marginal. Two spurs on caudal tibiæ. Club 2-jointed, the antennæ 10-jointed; distal club joint the longer, subequal to funicle 1. Pedicel much shorter than the funicle joints of which 2-5 are cylindrical oval and subequal, a third or less shorter than 1. Mandibles stout, tridentate.

*Habitat*: Harvey's Creek (Cairns), Queensland. Jungle, November 15, 1913 (A. P. Dodd).

*Type*: No. Hy 3272, Queensland Museum, Brisbane, the female on a tag; head and hind legs on a slide.

**5. EUDECATOMA TRINOTATA** new species.

*Female*:—Length, 2.60 mm.

The same as *circumnodata* but the whole mesothorax black, the occiput mostly black, also the cephalic femora and most of propodeum while on the pronotum there are three roundish black spots, one on each side in the dorso-lateral aspect centrally, the other mesal at

cephalic margin and quadrate (yet obscurely connected or barely separated from an opposite transverse spot at caudal margin). Otherwise quite the same.

From two females caught by sweeping jungle growth along the Mulgrave River, April 12, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3273, Queensland Museum, Brisbane, two specimens on a tag, the antenna and hind tibia on a slide.

#### 6. EUDECATOMA RUFIPRONOTUM new species.

*Female*:—Length, 2.67 mm.

The same as *trinotata* but the pronotum wholly reddish, also the latero-caudal part of each parapside, the latero-distal margins of scutellum narrowly and the propodeum rather narrowly along each side of the median channel. The hind coxæ are also reddish above as in *circumnotata*.

Form one female captured with the preceding.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3274, Queensland Museum, Brisbane, the specimen on a tag with the preceding; antennæ and fore wing with type slide of *trinotata*.

#### 7. EUDECATOMA CIRCUMNOTATA new species.

*Female*:—Length, 2.75 mm.

Reddish brown, the head, legs and abdomen yellowish brown, the antennæ yellow. Vertex centrally and upper occiput, dorsal pedicel, tip of club, cephalic margin of scutum, caudal margin of pronotum narrowly, an obscure spot center of scutum at caudal margin, meson and cephalic third of propodeum, caudal coxa laterad, middle and hind femora (cephalic femur near base), lateral axillæ, center of immediate base of abdomen (dorsad) and four stripes across abdomen, black. First two abdominal stripes semicircular and rather widely separated along the meson, the second larger, the third nearly straight, the fourth abbreviated (composed of two closely applied cross-stripes). Head and thorax umbilicately punctate. Venation reddish brown, the marginal vein a little longer than wide, the postmarginal vein absent, the stigmal longer than marginal, usual. Antennæ 9-jointed, the club solid. Propodeum with a median channel with acute margins. Submarginal vein white at apex. Funicle 1 not half the length of the scape, longer than the pedicel, somewhat longer than wide, subequal to the next three joints, 5 a little shorter. Ring-joint distinct. Hind tibiæ with two spurs. Antennæ inserted in the middle of the face.

From one female caught by sweeping jungle growth along the Mulgrave River, April 12, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 3275, Queensland Museum, Brisbane, the specimen on a tag; hind tibia, antenna and a fore wing on a slide.

In a second female, the second, curved abdominal stripe did not quite meet the first stripe laterad.

#### GENUS CRATODECATOMA Cameron.

“Antennæ apparently 11-jointed, placed in the middle of the head, malar space two thirds of the length of the eyes; scape not reaching the ocelli; antennal depression shallow, not clearly defined, narrowed above. Ocelli in a curve. Occiput not margined. Pronotum moderately large, roundly narrowed from the apex to the base, the apex broadly rounded, margined. Metanotum triangular, with a rounded slope, the sides and center keeled and with three or four striæ on either side. Abdomen shorter than thorax, the back flat, with the



sides rounded; the first segment is the largest, not quite as long as the following three united, the fourth and fifth longer than the preceding two; the ovipositor short, broad, projecting upwards. Wings with a large cloud in front shortly beyond the middle; marginal vein twice the length of the postmarginal, which is not quite as long as the stigmal branch; the latter cleft at the apex; the lower division the larger, it is thicker and triangular. Legs stout, the hinder longer and thicker than the others; middle tibiæ with one spur, the hinder apparently without any. Pronotum and base of mesonotum finely punctured, the rest of the latter finely, closely transversely striated.

Hind tibiæ with some bristles behind, very indistinct and confused with hair. Antennæ thickened toward apex, pedicel narrowed toward base, twice longer than wide at apex; funicle 3 longer than wide, 4 and 5 as wide as long, the others wider than long. Number of joints in club uncertain, counted as two and no ring-joint; therefore antenna 11-jointed.

The pronotum is shorter and narrowed in front as compared with *Decatoma*, it also differs in the mesonotum and scutellum not being umbilicately punctate, in the marginal vein being longer and not thickened, and the abdomen sessile, not with a distinct peduncle as in *Decatoma*. When the male has been discovered, the species may be removed from the Decatomini, of which it has hardly the facies."

### 1. CRATODECATOMA RUFICEPS Cameron. Female. Genotype.

Length, 5 mm.

"Black; head, apex of pronotum, almost the basal half of mesonotum, basal abdominal segment entirely and the sides of the second and third, red; antennal scape and the following two joints of a paler red; legs black, tarsi rufo-testaceous, their last joint black; wings hyaline, a large fuscous cloud at the middle, extending from the base of the marginal to the end of the postmarginal vein and enclosing the stigmal vein; narrowed at the costa, becoming roundly widened to apex, *i.e.*, posteriorly, which is roundly transverse and extends shortly beyond the middle. Head closely, finely punctured, occiput more finely punctured than the rest. Pronotum finely, closely, transversely punctured, mesonotum more strongly transversely striated, the center more strongly than the sides. Basal half of scutellum finely, closely striated, the striæ broadly rounded; the apical more strongly transversely striated, except extreme apex which is smooth. The raised broadly rounded, central part of the metanotum smooth, the basal lateral part aciculated. Propleuræ distinctly closely striated, the striæ roundly curved. Meso and metapleuræ smooth, or faintly aciculated, and shining. Basal half of abdomen smooth, the apical aciculated.

Pubescence short and very sparse, longer and denser on tibiæ. Ovipositor broad, obliquely directed upwards from the ventral to dorsal surface, its apex projecting shortly above the back.

*Habitat*: Gosford, New South Wales."

This is certainly a most peculiar form for this family. It is most probably misplaced.

## TRIBE ISOSOMINI.

### GENUS ISOSOMA Walker.

#### 1. ISOSOMA RAVOLA Walker. Male; female.

Walker, 1839, pp. 4-5.

"Mas. *Atrum, antennae nigrae, frons flava, prothoracis latera antica flavo maculata, pedes nigro-picei, tarsi fulvi, alae limpidae.*

*Atrum*: capitis frons flava: oculi et ocelli rufi: antennae nigrae: prothoracis latera antica flavo maculata: pedes nigri; trochanteres picei; genua fulva; tibiæ piceæ, apice







